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## ORIGINAL LECTURES.

### CLINICAL LECTURES ON INHERITED SYPHILIS.

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#### LECTURE I.

GENTLEMEN: I shall call your attention this morning to inherited syphilis; a very important subject, because the disease is very frequent, is to be met with in all classes of society, is protean in its forms, and must often be recognized and treated under the most embarrassing circumstances. The moral and social questions connected with the disorder make it necessary for you to be perfectly familiar with its peculiarities, for the peace and well-being of families will often depend upon your decisions. See to it, then, that you are sufficiently well informed to furnish reliable and truthful opinions upon the subject. See to it that you do not hereafter disturb domestic happiness by untimely statements or errors in diagnosis.

This hospital is very rich in illustrations of this disease, and I shall avail myself of the opportunity of showing you some very interesting cases this morning; but I want to say in the beginning that I have not at present the material to illustrate all the different varieties of the disease, while the wards happen to be very well supplied with examples of some of the late lesions of the affection.

The history of the first patient whom I shall show you is as follows:

*Case I.*—J. W., æt. 2 months. In 1865 his mother had primary, followed by constitutional, syphilis, which she did not contract from her husband, who has always been a healthy man, and who was at that time away from home. She has had no severe tertiary manifestations. Her body is covered with scars of a previous skin-eruption, but she has not suffered from any acute symptoms for more than a year. Excepting with this child, she has not been pregnant since she contracted the disease.

He was born March 29, and at this time weighed nine pounds and two ounces, and appeared to be healthy in every particular. When two weeks old he began to suffer from "a cold in his head," and when four weeks old a mottled eruption appeared over his thighs and buttocks. This gradually spread to the trunk and legs. Since then it has never disappeared.

*Present condition*, June 4, 1872.—He appears to be fairly nourished, is quite fat, but his muscles are rather flabby. He is suffering from persistent though not severe coryza. The lips are not fissured. Over the forehead and upper part of the cheeks is a faint dark-colored mottled eruption. On the lower inner part of the cheeks and the chin the skin is "bistre-colored," or has the appearance of being stained by a solution of some dark-brown substance. The arms and upper part of the trunk are covered with obscure copper-colored spots. The eruption is best developed upon the buttocks and lower extremities, where there are numerous copper-colored, squamous spots, round or oval in shape, from a few lines to a quarter of an inch in diameter, and but slightly if at all elevated above the surface. The palms of the hands and the soles of the feet are perfectly healthy. There are no mucous patches anywhere.

His general health is moderately good, though he is rather irritable and suffers a good deal from diarrhœa, the discharges being green and mucous.

There are several points in this case that I hope you have noticed as I read the history. These are the fact that the disease has developed itself in an unequivocal manner in a child whose mother at the time of conception and during her gestation was not suffering from progressing constitutional syphilis; and the occurrence of coryza, followed by a scaly eruption, in a child who at birth was very healthy and weighed more than new-born infants ordinarily do. I remember seeing this boy in the wards the day after his birth, and, as I did not then recollect that the mother had had venereal disease, I did not think of his being infected by this poison. This is not an uncommon history; and you must not think that syphilitic children are always born with the marks of the disease upon them. On the contrary, the opposite is more frequently the case; and of the children that we see here, many of them appear to be plump and hearty at birth, and do not present that old, weazened appearance which has been described by some authors.

You have heard the account of the coryza by which he has been affected. This is one of the earliest, if not the very first, of the symptoms of the disease in a majority of the cases. It is likely to attract the attention of the mother at an early period, because coryza, which is of little importance in older children and adults, interferes so much with the nursing of young infants that in them it becomes very important, and demands the care of the physician. In this instance it has not been at all severe.

Certain important symptoms of congenital syphilis have not been developed in this child. In many or most cases of the disease, peculiar and very characteristic lesions of the mucous orifices follow the coryza of which we have been speaking, so that we often find it associated with linear fissures at the orifices of the nose, and upon the lips. These are comparatively superficial, have red bases, from which blood oozes, or they are covered with dry brown crusts. They radiate from the corners of the mouth, nostrils, and sometimes from the external angles of the eyes. When they are well developed and are associated with coryza, they form such a characteristic picture that the experienced physician can determine the nature of the affection at a glance. When these lesions have healed, they often leave permanent linear cicatrices,—a fact which it is well to remember, as these are so peculiar as to be very valuable in the diagnosis of late syphilitic manifestations, the nature of which may be doubtful. I say these symptoms have not been developed in this and some of the other children whom I shall show you.

The cutaneous eruption in this instance is squamous, and you see that it has a distinct copper hue. In addition to this, I ask you to notice the peculiar discoloration of other portions of the skin. You notice that the lower portion of the face especially is dark, and has a stained appearance. The peculiarities are not easily described, but the color has been compared to that of bistre, or staining from weak coffee. This appearance has been described by Trousseau (Clin. Med., vol. iv., Philadelphia, 1871), who believes it to be pathognomonic of the disease which we are discussing. I consider it a most valuable sign; and, although it is imperfectly developed in this case, the appearance is sufficiently characteristic to lead an experienced physician to suspect this child to be the victim of congenital syphilis.

In some cases, instead of having a squamous syphilide, such as is present in this child, the eruption consists of bullæ,—pemphigus, as it is termed in the books.

My own experience would lead me to conclude that this form of skin-eruption occurs in those cases in which the disease manifests itself very soon after birth.

It usually appears within a few days or weeks after the commencement of extra-uterine existence. My experience has also gone to show that it is only present in those cases in which the cachexia is profoundly developed; and, while pemphigus is a very important, it is not a very common eruption in inherited syphilis. Some authors have gone so far as to look upon all cases of infantile pemphigus as very suspicious, and as nearly always having a specific origin. Indeed, I am not sure but that a few good authorities say that it always has. I am very positive that this is not true, for it has been my fortune to meet with many cases of infantile pemphigus; and if I were to draw a conclusion from what I have myself seen, I would say that no variety of skin-disease is more frequent than this among children between one and fifteen months old. But I presume that my experience has been somewhat peculiar, for I have seen pemphigus sweep through the wards of this hospital, upon two separate occasions, almost like an epidemic. But at these times it presented well-marked and very important characters. The eruption was very constant in its seat, being located upon the neck, chest, and back, while it appeared but rarely upon the extremities, *and, if at all, never upon the palms of the hands or the soles of the feet.* This I conceive to be the important distinction between specific and non-specific pemphigus. The former in the majority of cases attacks the palms of the hands and soles of the feet, and is nearly always confined to these parts. If you meet with this bullous eruption limited to these locations in young infants, you are justified in suspecting that they are the subjects of inherited syphilis. According to my own belief, it would amount almost to a positive conclusion.

In certain rare cases, specific pemphigus first makes its appearance upon other parts of the body. I have met with a few such, and in all of them the disease existed at birth or set in immediately after it. In one instance it appeared upon the face at the end of the first twenty-four hours, and spread very rapidly. Of these infants, those who were born alive perished in a short time; and, indeed, out of all the cases of specific pemphigus which I have seen, I cannot now recall one who lived beyond a few months, while most of them succumbed within a few days or weeks. I have previously hinted that it occurs in those who have inherited a severe form of the disease,—those whose systems are thoroughly saturated with the syphilitic poison. For this reason the prognosis of specific pemphigus is very serious,—a statement which is but a reiteration of a common opinion. I believe that all authors agree in regard to this point.

In the patient who is now before you, the disease seems to have commenced about a week after birth, but there were no positive symptoms of it until the child was about four weeks old. This is not uncommon, and inherited syphilis usually makes its appearance within the first three months of life. Of Diday's frequently-quoted cases, the affection commenced in 86 out of 158 children before the termination of the first month. But this is not a rule to which we find no exceptions. Some time since, I showed the class an infant over a year old, whose mother had suffered severely from a constitutional disease, and who then had for the first time a mild syphilitic eruption upon the trunk. I have also seen several cases in which the first symptoms were noticed much later than this,—in the third year of life. One of these I shall show you presently.

By what you see in this child, and from what I have already said, you have learned that the first symptoms of inherited syphilis are analogous to, and must be compared with, those of the secondary stage of acquired syphilis in adults. I think, too, that my experience in this hospital goes to show that just in proportion as the appearance of these is delayed until a remote period after birth, will they be mildly developed. In some instances they are so mild as to escape observation, or else they are not developed at all. I have reported such a case in the *Photographic Review* for February, 1871, and I shall now bring another one before you.

*Case II.—Inherited Syphilis without the History of Secondary Symptoms; Severe Tertiary Lesions.*—E. H., æt. 8 years. Her parents have had six children, of whom this one is the third. Of these only the eldest and our patient are now alive. The former is a healthy girl. The second child died early in its second year, of summer-complaint. The last three children are all dead, having perished within a few weeks after birth. Her father died four years ago, of hæmatemesis. His wife says that he never had syphilis in any form, but that she was suffering from the disease at the time she conceived this child. Four months after her birth, tertiary symptoms appeared, and she had nodes on various parts of the body. In the middle of 1870 she was the subject of active and severe tertiary syphilis.

At her birth this child was perfectly well. She continued so until she was a month old, when an abscess formed on the back. This appears to have been the result of a contusion which she received at the time. From this time until she was two years old she continued well, so far as her mother was aware. Her mother denies that she ever had any symptoms of the disease with which she is now affected. She was then attacked by infantile paralysis, which presented the ordinary characters of the disease. Five or six months after the occurrence of the paralysis she began to suffer from convulsions. These were preceded by hard, painful swellings upon different portions of the head, but especially upon the forehead, where suppuration finally occurred. This was accompanied with enlargement of the lymphatic glands of the neck. She was relieved by treatment, and remained pretty well until she was four years old, when she had nodes upon the upper part of the tibia, the backs of the hands, and the frontal bone. These were accompanied by cutaneous ulcers.

When she was five years old, February, 1869, she was admitted to this hospital, suffering severely from these symptoms. Shortly afterwards a node appeared at the outer condyle of the left humerus, and gradually increased until there was swelling of the whole elbow, with slight synovial effusion. From then until now she has suffered severely from repeated outbreaks of tertiary symptoms. Two years ago, otorrhœa, with which she had been affected at intervals, reappeared, and has continued ever since. Nine months ago she had an attack of interstitial keratitis, which has left the cornea of the left eye hazy. Two weeks ago she complained for the first time of sore throat, and with this she began to discharge offensive purulent matter from the nose and pharynx in considerable quantities.

*Present condition*, June 5, 1872.—Pale and very anæmic. On forehead, in median line, is a depressed white scar, from which pieces of frontal bone were removed by Dr. Duer, last fall. There is a slight opacity of left cornea from a previous attack of keratitis. (Right eye lost in infancy.) Copious and very offensive, thick, purulent discharge from nostrils. Teeth small, upper central incisors imperfectly developed and slightly notched; but, though suspicious, they are not characteristic. Upon inspecting the throat, thick, yellow, and very fetid pus is seen running from the posterior nares into the pharynx. Upon the half-arches are superficial sloughing ulcers. She has a copious discharge of pus from the left ear. At various points upon the surface of the body are the cicatrices of previous eruptions and ulceration. She now has substernal tenderness, and there are rapidly advancing nodes on each tibia.

I hope that you have been fully impressed by the salient points in this case. The syphilitic origin of the disease is undoubted; but, carefully as I sifted the history, I could not learn that she had ever suffered from any of the ordinary secondary symptoms, while, as you notice, she had nodes upon the forehead when she was two years and a half old, and these were followed

by a similar lesion on the extremities. I have had an opportunity of watching these swellings run their course, and they have all the characters of the nodes of acquired syphilis. Indeed, you can prove this for yourselves by examining those at present on the tibia. It is asserted by Mr. Hutchinson (Diseases of the Eye and Ear in Inherited Syphilis, 8vo, London, 1863, p. 216) that the nodes of inherited syphilis first affect the lower part of the humerus. I have now under my care a patient in whom the first bone-disease was in this part, but in this child the forehead was first involved; and I should certainly say, from the cases which I have seen in this hospital, that the forehead and tibia are as likely as the humerus to be primarily affected. But the most interesting point in the case is the alleged absence of secondary symptoms. Some syphilographers, I know, doubt the correctness of such histories as this one. I have already alluded to another which I published in the *Photographic Review* for February, 1871. In that instance the disease appears to have been transmitted from the father, and the child remained well until she was two years and nine months old, when nodes appeared on the tibia, and rapidly produced destruction of the bone. The illustration accompanying the history of that case shows that the disease of the osseous system was of no ordinary severity. Indeed, I do not remember to have ever seen it greater in any of the many and terrible examples of acquired syphilis that I have had the opportunity of examining. The only authority, so far as I am now informed, who acknowledges that these tertiary lesions of hereditary syphilis may be thus tardy in their appearance, and not be preceded by primary or secondary symptoms, is Melchior Robert (quoted by Lancereaux, Treatise on Syphilis, New Syd. Soc. ed., vol. i. p. 166). Of his opinion Lancereaux says, "This interpretation may appear hazardous." There is evidently much difficulty in arriving at the truth, and I must confess that I have grave doubts about the secondary symptoms not having preceded the tertiary in this and other similar cases. They may be so mild as to escape the notice, not only of the mother, but also of the physician. Allow me to illustrate this. I alluded a moment ago to the infant in whom the first symptoms of the disease made their appearance when the child was over a year old. I speak positively about that child, for my colleague, Dr. Maury, was kind enough to give me his opinion in regard to him. The mother had been severely affected by constitutional syphilis, the skin being covered with scars, the cicatrices of nodes appearing over the superficial bones, and the hard palate and bones of the nose being totally destroyed. At the time of her conception, and during the whole of her gestation, there were no active symptoms, but, on the contrary, she thought she had recovered perfectly. Seeing that she had been so profoundly affected, I watched the child with great interest. There were absolutely no signs of the inherited disease until the period spoken of, when he had a sparse, poorly developed, scaly eruption upon the lower part of the abdomen, the buttocks, and thighs. At this time he was little less than an infant Hercules, and I could hardly convince myself that the disease was specific in its origin, especially as it disappeared spontaneously in a short time. But a little later he began to suffer from nodes, and then the nature of the disease was perfectly plain. Now, gentlemen, had this child not been watched from day to day, the initial lesion of congenital syphilis would have passed unnoticed. I suspect that such was the case with E. H., and also with my other patient whose history is published in the *Photographic Review*.

Some may doubt that these are examples of hereditary syphilis. The only other explanation for the anomaly is to suppose that the disease was acquired by both children. But you will never meet with a more unequivocal history than that of the girl whom I show you this morning; while in the other patient of whom I have spoken, it was as clear as is generally obtained. The direct testimony of the parents is likewise opposed to such a view, for I was not oblivious of these objections when I was examining them.

It seems to me from what I have seen that these mild secondary symptoms are to be met with in those children who are ordinarily said to inherit the disease from their fathers, or whose mothers have passed beyond the second into the third stage of the disease, or in whom the affection has been influenced by treatment, or is for the time arrested. Your attention will be called to this hereafter. The point which I wish to impress upon your minds at present is, that the severity of the secondary stage of inherited syphilis forms no measure by which you can determine what will be the extent of the tertiary lesions. The child who is before you this morning proves this; and I could support the opinion by citing several other striking examples which have fallen under my notice. The most severe bone-lesions may follow the most trivial secondary manifestations. This may probably be partly accounted for by the fact that but few of the infants who have the disease early in life are left without treatment, while a large number of these little patients succumb soon after the affection sets in, so that the treatment prevents these symptoms in the one case, while in the other the child does not live long enough for them to be developed. It is therefore probably those who suffer little or none in early infancy who live to reach the period when the tertiary symptoms manifest themselves.

The patient whom I now have before me furnishes you with a good representation of the lesions of the third stage of inherited syphilis. You will find these phenomena described by few writers: indeed, the general opinion has seemed to be that these symptoms belong to the acquired disease in adults, and not to the inherited in children.

There is one point upon which I wish to dwell for a moment before leaving the case. This is the course of the nodes when they were situated near large joints. We have had ample opportunity of studying this in our present as well as in some other patients. The danger is that you may mistake this condition for synovitis, especially if the secondary symptoms have passed unnoticed, and this is the initial bone-lesion of the third stage of the disease. I have seen this error committed in one instance. This occurred when the node developed upon the lower end of the humerus. The patient, after a few days of complaint and inability to move the arm, had swelling of the elbow, accompanied by some synovial effusion. It is when the child is first seen at this stage that the error in diagnosis is most likely to be made; but you will be able to arrive at the truth if you examine the joint carefully, and, above all, if you feel the node upon the epiphysis; for it was in this part that the disease was located in the children of whom I have spoken.

In this girl, the disease of the pharynx and nares is sufficiently well marked. This is entirely different from the coryza to which I directed your attention when the first patient was in the room. That was a secondary, and this is a tertiary lesion. That was probably due to simple erythema or mucous patches upon the Schneiderian mucous membrane, while this, appearing as it has done simultaneously with the nodes in various parts of the body, is likely to be owing to disease of the bones of the nose. The fetor and other characters of the discharge support this opinion. I shall not be at all surprised if we have destruction of the hard palate of the child in a short time. This is not a very frequent lesion. Mr. Holmes (Surg. Treat. of Diseases of Children, 8vo, Philadelphia, 1869, p. 351) states that he has never met

with it in inherited syphilis. I have already alluded to a case which I have recorded, in which there was an orifice an inch long by half an inch wide, in the roof of the mouth; and I have, at this moment, a child aged about eleven years under my care who has inherited constitutional syphilis, and who has nodes upon her forearms, tibia, and sternum. At the same time, she is suffering from caries of the hard palate; though this has not progressed very far.

Before dismissing this patient, I ask you to notice the condition of her eyes. As you have heard, the right one was accidentally destroyed in infancy. The other remained healthy until nearly a year ago, when she had an attack of interstitial keratitis. This gradually improved, but it has left the cornea somewhat hazy, so that its appearance resembles ground glass. I call your attention to this, so that you may note the results in certain cases of interstitial keratitis, which is an important ophthalmic lesion of inherited syphilis. I fortunately have the opportunity of showing you examples of the disease in its active stage.

*Case III.—Inherited Syphilis; Interstitial Keratitis; Idiocy.*—J. K., æt. 6½ years, came under observation two years ago with a copious specific eruption and mucous patches. These in a great measure disappeared under the use of antisyphilitic remedies continued for some time, but for more than a year she has been taking no medicine. For some weeks she has suffered from irritability of the eyes, though she has shown but little disposition to avoid the light. Upon inspection, a small white spot, unattended by ulceration, is to be seen near the centre of the left cornea. There is no congestion around that structure. In the right eye, the disease has extended further, so that almost the whole cornea has become opaque, and has the appearance of ground glass, while around it is a well-defined but narrow zone of injected vessels.

This, gentlemen, is a fair representation of the earlier stages of interstitial keratitis, but in some instances the disease progresses further than in this child, as it has done in the boy whom I shall now show you.

*Case IV.—Inherited Syphilis; Interstitial Keratitis following Nodes; Idiocy.*—P. K., æt. 8½ years, has been under observation for two years. He is the brother of J. K., and, like her, he is decidedly idiotic. When first seen, he was suffering from a squamous syphilide and mucous patches, which disappeared under the use of specific remedies continued for several months. In May, 1871, he had a node on the left humerus, which caused him much pain, and finally yielded to iodide of potassium. From then until last fall he continued pretty well. At this time he was found to be suffering with sore eyes. The disease began in the cornea and gradually extended until the whole of both of these structures was involved. The left eye presents the usual ground-glass appearance, and there is an injected zone around the margin of the cornea. In the right eye the margin of the pupil is seen with difficulty through the cornea, which, instead of being non-vascular and white like ground glass, is deeply injected, and of a sort of brick-dust or salmon hue. Vessels can be seen traversing every part of its structure, while around it the tissues are deeply injected. There is no ulceration on any part of it, and the boy does not complain of intolerance of light. His upper central incisor teeth are well formed.

In these two cases, you have examples of two stages of one of the most interesting of the ophthalmic lesions of congenital syphilis. These, like all the other effects of the disease, vary with its stage. You are well aware that during the early part of the secondary stage of the acquired affection in adults, the eye is liable to be attacked by serious inflammations; but the one which is chiefly interesting and important is iritis,—a disease which is by no means analogous to the one which we are now discussing. Iritis, while it sometimes occurs, is quite rare in infantile syphilis, much more so than it is in the acquired disease of adults. On the other hand, the affection of which these two children present examples is, if we may judge by the cases in this hospital, sufficiently common, and is the more interesting because it has no analogue among the symptoms of the acquired affection. Keratitis is an inflammation of the cornea, and was until recently supposed to be scrofulous in its origin. In the last decade, however, Mr. Jonathan Hutchinson described it again, under the name of Interstitial Keratitis, and gave it as his opinion that it never appeared except as the result of inherited syphilis. This statement has been questioned by some eminent authorities, but I know of no reason to doubt the conclusions of Mr. Hutchinson. I have had the opportunity to examine a large number of cases of scrofula in the Children's Department of this hospital, and I have never seen interstitial keratitis associated with other symptoms than those of inherited syphilis.

In the first and the younger of these patients, the affection has but begun. In the one eye—the left one—you see that there is no manifestation of disease except a small opaque spot in the centre of the cornea. This is the way in which keratitis ordinarily commences. Sometimes the opacities are multiple, and the disease spreads from two or more centres at the same time. The location of these spots, in the beginning, is near the middle and in the substance of the cornea, and they spread from the centre towards the circumference until the whole of the structure, excepting a small circle upon its margin, has become opaque. This condition is already represented in the opposite eye, which presents the characteristic ground-glass appearance of the disease. In addition, I ask you to observe one or two other striking peculiarities of these cases. Neither has any ulceration of the cornea, which is always true in uncomplicated keratitis. You notice, too, that upon a mere ordinary inspection the girl does not seem to suffer much with her eyes, and unless you examined them carefully you might fail to see that they were diseased. They are evidently somewhat irritable, for when she comes into a bright light she makes some effort to protect them; but the irritability is not great, for she never refuses to expose herself to the light in any portion of the ward if curiosity or pleasure tempt her. The same may be said of her brother; and this is true of nearly all cases of interstitial keratitis which I have had the opportunity of observing.

A non-professional person would not suppose the girl to have any disease of the cornea, unless he made a somewhat critical examination. This is due to the fact that there is but little increased vascularity of the other structures of the eye. There is no deeply-injected zone immediately around the cornea, but only a little increase in the vascular supply. This is the usual condition in this disease, and I but describe one of its ordinary characters when I call your attention to this peculiarity. In some instances, however, you will see the inflammation pass beyond this stage, when the eye loses the smooth, slightly-polished, opaque, ground-glass appearance, and the cornea becomes slightly granular and faintly pink instead of white. This condition is illustrated in this boy,—the girl's brother,—whose right eye is injected, red, with the cornea slightly roughened and salmon-colored, while around it there is an irregular zone of turgid vessels, fringes of which extend into the structure of the almost opaque cornea itself. This is a severe case of syphilitic keratitis, and is a very good illustration of the characters which it sometimes presents when it has been neglected.

I hope that you have noticed that in both of these children the inflammation of the cornea is a symmetrical lesion. This is usual; though in the cases which I have seen, the disease was not equally severe in both eyes. It had usually advanced further in one than it had in the other when the patient sought advice. This is due to the fact that, though a symmetrical disease as

ordinarily seen, interstitial keratitis usually begins on one side first, and after a short period attacks the other.

Both of these children are over five years old. There is another child in the ward in whom the disease is just setting in as she is entering her twelfth year. Keratitis is a late manifestation of inherited syphilis, and is to be placed in the group of tertiary, rather than secondary, symptoms. You see that in the boy it followed the subsidence of the skin-eruption, while it appeared after a node upon the humerus. In the girl it has preceded any bone-symptoms. In E. H., however, it followed repeated outbreaks of nodes upon the forehead and humerus. In the other case which I alluded to as being at present in the ward, the commencing lesion is associated with tertiary symptoms.

Being a symptom of the last stage of the disease, keratitis is not to be looked for until the patient has passed beyond the period of infancy and entered upon that of childhood or adolescence. It usually occurs between the eighth and the eighteenth year. (Hutchinson, *loc. citat.*)

There is only one other point in connection with these two children to which I wish to direct your attention. It cannot have escaped your notice that they resemble each other in the most striking manner, and I now ask you to notice the fact that they are both idiots. I have for some time had a suspicion that there is a relation between idiocy and congenital syphilis,—that in a given number of syphilitic infants a larger proportion of them will be defective in mental development than among the same number of children not so diseased. I should not be willing to express a positive opinion upon this subject without having had further opportunities to investigate it. I think, however, that the matter would repay examination.

## ORIGINAL COMMUNICATIONS.

### LIP-READING AND ARTICULATION IN THE EDUCATION OF THE DEAF AND DUMB.

BY CHARLES H. BURNETT, M.D.,

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THE system of educating mutes by lip-reading and articulation is the so-called German system, although at the present time employed in most continental countries; within the last four or five years it has been introduced into England. Mr. W. B. Dalby, aural surgeon to St. George's Hospital, London, has done much to bring this subject before the English people.

In 1871 he read a paper on this topic before the Social Science Association, in Leeds, and in the early part of this year published a pamphlet containing many important and interesting facts connected with the method of instructing the deaf and dumb in the use of articulate speech. It is to this pamphlet, entitled "The Education of the Deaf and Dumb by Means of Lip-reading and Articulation," that I owe the principal facts contained in this article. To these facts I have added some personal observations, hoping that the paper, in the end, might not be uninteresting to the profession in my own country.

The system of lip-reading is not new, for we are told that in the eighth century of our era a mute was taught the Christian religion by reading from the lips of John de Beverley, Archbishop of York. The system of to-day is that elaborated in the last century by Heiniche, a German. He met with many obstacles to its introduction, and died without seeing the triumph of his ideas. His plans of instruction are now, however, fully understood, and thoroughly taught, in Germany and other continental countries.

This system, as well as any other, demands intellectual faculties in the child, "not more than usually deficient;" and of course cleft palate, and other malformations of the organs of speech, entirely preclude its use. The education commences when the child is seven years old, and eight years are necessary before the child can read from the lips of *ordinary* persons, and speak so as to be understood by them.

*All signs are excluded*, excepting such as are necessary to attract the attention of the child and direct it to the teacher. Much depends upon the inherent powers of attention and imitation on the part of the child, for this is the substance of the instruction and its success.

A child who has never received any instruction is brought into a room where a hearing person is spoken to by the teacher. "The child soon notices that when the teacher speaks or moves his lips, the listener turns and looks at him, and he thus learns to direct his attention to the *lips* of the teacher." By placing their lips and tongues in proper positions the mutes are taught to use an alphabet of sounds, and as the pupil progresses he is taught to join some of the simpler sounds together and form words.

When the word is at last mastered, the child's attention is drawn to some object or picture representing the word pronounced.

H is the first sound learned. A is the next. By depressing the child's hand, held in that of the teacher, the child is taught to lower his voice, and by placing the child's hand on the teacher's larynx he is taught to perceive the slighter vibrations when the voice is lowered.

When the sound for the letter A is learned, the child is taught, for example, the sound for the letter P. By the union of these two sounds the word "ape" is uttered. After learning the letter A, it is shown to him written down. He is taught also to write it. He is then able to recognize the letter or sound when used by his teacher—to utter it himself—to understand its meaning—to recognize it when written—and to write it himself.

The sound-alphabet is divided into bi-labials, inciso-labials, inciso-linguals, and gutturals. The sound for Y is the last learned, and cannot be mastered till the vowel sounds are perfectly learned, but it will then be found to be composed of the two sounds equivalent to E and A. Hence, if the *mute* is taught to pronounce a word written "eas," he will articulate the word "Yes," as used by us.

Mr. Dalby says, "The spelling-book of the mute, therefore, will differ in some degree from that of an ordinary child, as he will not make use of or connect in his mind the same sounds that we are accustomed to do in pronouncing the individual letters of the alphabet, but he will produce the very same word when the letters are joined together. Thus: a-p-e spells ape, for us and him alike; but each letter, individually, he will call by a different sound to that which we make when naming it. Strictly speaking, the mute's alphabet is more correct, but less arbitrary, than ours."

The simplest sounds taught are labials, and these, in fact, are the sounds first learned by children who can hear. The next sounds which are learned are those formed by the teeth and lips. Care is necessary to produce the expirations properly, otherwise the sounds may die upon the lips before they are thoroughly emitted from the mouth. This applies especially to the English language: children who have had as much as two years' instruction will, however, detect any one addressing them with the form of a word without emitting any sound.

Accentuation of a syllable is taught by bringing the arm of the pupil down forcibly as the accentuated syllable is being pronounced.

As the pupil advances into his second year, he is taught to pronounce words of two or more syllables, and those in which two or three consonants occur, before or after vowels, as in the words *arms*, *straw*, *place*, etc. In learning these, however, the tendency of the child is to pronounce the words so deliberately as to virtually make polysyllables of them; for example: he will say ser-ter-aw- for straw, per-lace for place, etc.

Practice, however, overcomes this defect to a great degree. Dactylology, or the science of conversing with signs, is sedulously excluded in the education of mutes by means of lip-reading. It distracts the attention of the pupil, and he ceases to improve in the use of speech. After a child has learned to talk, he may learn to use dactylology as an accomplishment.

Mr. Dalby says, "If the child can make its wants known by making signs, although its attention may be called to the lips of the teacher, it will not be able to maintain its attention with sufficient perseverance and care to permit of the full development of the fine muscular sense inherent in the tongue, lips, palate, and throat."

In at least one of the institutions for the education of mutes in our own country, the reverse of this plan is adopted, and the children are taught articulate speech as an accomplishment; but, as I am informed by one of the trustees, with no very brilliant results. The writer had an opportunity, a few months ago, of visiting the celebrated Deaf and Dumb Institute in Vienna, where the system of lip-reading and articulation is taught, to the exclusion of all systems of signs. He noticed, however, that the pupils constantly used signs with each other, and, upon inquiry, learned from the teacher that this was a self-taught system of dactylology, and used in common by most mutes. Judging from the proficiency of the pupils in the use of articulate speech, this system of signs *among themselves* had not interfered with their progress in the mastering of their tasks according to the methods of the institution.

The exclusion of all signs applies therefore entirely to the intercourse between the teacher, or parents, and the pupils.

Thus the child soon learns that his only means of conveying information to his teacher, or obtaining it from him, is by the use of lip-reading and articulation.

Children born deaf are not the only ones benefited by this method of instruction. Those who have become deaf, retaining however the power of hearing very loud sounds, yet unable to learn to talk by the ordinary means, may be instructed by the plan under consideration.

It appears that such children learn to use speech a little more euphoniously than the perfectly deaf mute who is taught to use articulate speech.

2dly. If the child is able to hear words shouted near its ear, it will consequently learn much sooner.

3dly. Mr. Dalby says, concerning this very important point, "In the case of a child who has learned how to speak, and at an early age, say seven, has lost its hearing completely by scarlet fever or the like, it is well known that from the fact of its not hearing others speak it will not be tempted to make use of speech itself, will gradually depend more and more on signs, and in a short time will have lost all power of speaking. For such patients this system is invaluable; for if they are taken in hand as soon as they become deaf, they can, with very little difficulty, be made to learn lip-reading, and will thus retain their speech; or when it is beginning to be forgotten, will rapidly relearn."

The early years of instruction are filled with a high degree of physical labor to the teacher, but in time the more advanced pupils notice and correct mistakes occurring in the less advanced. The pupils are taught in classes, although residence in an institution devoted to this system is not necessary to the accomplishment of articulation and lip-reading on the part of the mutes. In fact, the advantage gained by early putting in practice what they have learned, and observing others in the daily avocations of life, is manifest. Hence the system of day-schools is perfectly applicable to this method of teaching, since it furnishes greater variety of intercourse, and is *much cheaper*.

Among the advantages of this system over the old method of dactylology may be cited the following:

The mute is furnished with a common means of understanding others, and making himself understood by all he associates with. The slowness of the method, in comparison with the ordinary method of communication by means of signs, is compensated by the *end attained* when the use of articulate speech is accomplished, and the child, when he leaves school, is able to talk to every one, and is not limited in his intercourse with the few who possess the power of communication with their fingers.

M. Saegert, the Inspector-General of Education of deaf-mutes in Prussia, in his report for 1856, says, "Ninety-nine per cent. of deaf-mutes have the organs of speech normal; they will speak if they have good sight and touch; the greater or less probability of success depends solely (*uniquement*) on the greater or less capacity of the master."

After the mutes have learned to use articulate speech, although their modulation is not euphonious, they can converse with any one on ordinary subjects, and follow conversation not addressed to them, if the speaker is not too far from them, and if they can obtain a good view of his features. Those who enunciate distinctly will have no difficulty in being understood by mutes. This fact can be readily proven by a visit to the celebrated schools of Cologne, Rotterdam, and Vienna. In the latter I had an opportunity of spending some hours —hearing the pupils questioned, and their replies. The examination consisted in a running conversation between teacher and pupils on different countries, their products, people, and government. The only error in any answer was that of a little fellow who, in reply to the question, "Who is President of the United States?" said, "Jefferson Davis;" but he was instantly corrected by a young girl of fifteen, who said, "Ulysses Grant."

The most satisfactory test of the efficiency of the system, so far as I was concerned, was the readiness with which the pupils understood my German, answering promptly and politely my questions, although fully able to discern that I was not a native. The voices of the pupils are not disagreeable or harsh, although unnatural and sad in their tones. Those of the girls sound more like the cracked voice of old age, and on this account are the more striking, since we expect in the young female the musical notes of youth. The boys' voices are not so strange, since we expect less from them in respect to the melody of speech.

The chief obstacle to the advance of this system of education, though far from being insurmountable, lies in the difficulty of procuring suitable teachers. Since few can be obtained who are willing or able to undertake the task, and as their acquirements must be great, their salaries will be high. It is said that one year of constant practice is necessary to perfect a teacher so that he can instruct even the beginners.

"It is practically found," says Mr. Dalby, "that it requires one teacher for every class of ten or twelve children; therefore, undeniably, nearly double the number of teachers are necessary for this than for the other system, and, consequently, it is the more expensive of the two."

When the pupil has at last learned to articulate words and to understand what is said to him, his education

may be extended by the ordinary method of reading, relieving the duties of a teacher, and adding greatly to the pleasure of the pupil. In three years of attentive study, a child will begin to converse on ordinary topics, will understand arithmetic and geography, and will be able to write well. As has been stated, eight years are requisite for learning to converse with *any one* in the affairs of daily life.

It is claimed that a positive benefit to the health of the pupil is one of the results of this mode of instructing mutes. This may be attributed to the more normal use of the pulmonary and laryngeal functions, besides the moral effects arising from a feeling, on the part of the mute, of a nearer equality with his friends and family.

All authorities agree in the opinion that, the sooner a child begins, the more rapid is his progress in learning to talk, and that an adult mute is a very unapt scholar, rarely making any advance in the use of articulate speech. Since it is evident that so much may be accomplished by the careful education of young mutes, may we not hope that this system will gain a fair trial in our own country?

## CLINICAL NOTES.

BY DR. H. C. WOOD, JR.

*CHRONIC ENDOCARDITIS—PRESYSTOLIC MURMUR—ABSENCE OF SECOND SOUND.*

THE following case is of some interest as representing what may be termed chronic endocarditis, affecting both the left and the right side of the heart. The affection appears to have run its course in about two years, and resulted in an almost complete obliteration of the mitral orifice, and in marked changes of the tricuspids. Apparently the latter lesions were not consequent upon the mitral disease, but were the result of the same cause that produced it. They were evidently not due to a giving way from strain of the valves, but were of similar nature, though of less extent, to those of the left auriculo-ventricular valve.

Clinically the existence of a diastolic murmur, strictly presystolic in time and in fact running into the systolic sound, was of interest. An examination of the heart after death showed that the conditions were the most favorable possible for the generation of such a murmur; the enormously dilated and hypertrophied left auricle and the peculiar fringe-like obstructions to the passage of the overdriven blood, united, could not fail to give rise to a sound.

The absence of an aortic second sound was also of interest. The reason of its absence is obvious. The left ventricle during life was probably never well filled, owing to the great obstruction at the mitral orifice. Moreover, when the ventricle contracted, the blood flowed back into the auricle at least as readily as it entered the ventricle. From these two causes the aorta was never filled with blood, never sufficiently distended to provoke a strong enough pulsation to drive the blood back upon the heart with sufficient force to generate the sound by the flapping to of the semilunar valves.

Therapeutically, the very great relief obtained from digitalis, and the sudden almost fatal dyspnœa, caused by the hot bath, are points worthy of study.

The following is taken from my note-book:

Jane Bates, æt. 25, mother of three children, entered the wards of Philadelphia Hospital, September 20, 1871. She states that she has never had rheumatism, but that she has been sick two years, with increasing dyspnœa and occasional severe cough.

*Present Condition.*—Patient is in good flesh. Her face is exceedingly cyanotic. The veins of the neck are large, but exhibit no pulsations. She suffers greatly from dyspnœa and also from a short dry cough; the expectoration is scanty, consisting only of bloody, frothy saliva and mucus.

*Physical Examination.*—The area of cardiac dulness is very much increased. The aortic sounds are normal. A very loud systolic murmur exists at left apex; also a very decided systolic murmur at ensiform cartilage; by carrying the ear to right of sternum this murmur is lost, but cannot be separated from the right sound.

Liver dulness extends about one inch below ribs.

September 24, 1871.—Night before last had ten grains chloral, which caused her to sleep until 6 A.M.; the night following it was tried, but without effect; it was again repeated, but made her sick.

September 27.—Ordered tincture of digitalis, gtt. x t. d.

October 5.—The digitalis affords her great relief. The dyspnœa has markedly lessened. The flow of urine has increased somewhat. There is no marked effect on the pulse, except that it is more regular, 100 per minute.

October 11.—Patient has steadily improved since last note. Pulse, average, 94; breathing and cough better. Passed during last twenty-four hours sixty ounces of urine.

November 11.—Continued taking tincture of digitalis, without any effect on the pulse, it remaining at 100 per minute; her general condition has somewhat improved; the swelling has decreased; the dyspnœa is less; appetite good.

December 11.—There has been no improvement since last note. Her pulse continues the same, notwithstanding the dose of tincture of digitalis has been somewhat increased and steadily continued up to December 9, 1871. Her limbs swell, and at times the abdomen. The legs have been bandaged, giving some relief and enabling her to walk about. On the 9th she was put into a hot bath (110° F.), but the dyspnœa instantly became intense, and accompanied with a livid purple face; after staying in bath ten minutes, death from suffocation became imminent, and she was removed. She has been passing for some days from eighteen to twenty ounces of urine per day. She suffers greatly from dyspnœa, but relief is afforded by Hoffman's anodyne. She has been spitting blood constantly in small quantities, with a hard cough.

A very careful study of the heart-sounds leads to the following conclusions: at the left apex there is a very loud systolic bruit, which is immediately preceded by and continuous from a soft murmur heard during the latter part of the diastole. At the right apex there is a marked systolic murmur which is apparently generated at the tricuspid valve.

The aortic sounds are masked by the apical murmur; but the first sound can be apparently separated by going clear to right of sternum. It is prolonged into a short, soft murmur. Second sound lost, or so exceedingly faint that it cannot be distinctly heard. Pulmonary artery sounds can be isolated; apparently normal. No murmur in carotid or radial. Mitral murmur very faint in back, scarcely to be certainly detected.

December 13.—Ordered pulv. digitalis, pulv. scillæ, āā gr. j five times a day, and comp. spirit juniper, f℥j t. d. Hypodermics to lessen the severe muscular pain in the shoulder.

December 20.—Amount of urine passed daily varies from twenty to twenty-four ounces. She is more comfortable. There is less shortness of breath, much less water in abdomen, and not quite so much in the feet. Pulse, 96. Cough very much better. No spitting of blood for a week. Stopped pills, and ordered comp. spirit juniper to be increased to f℥ij per day.

December 22.—The amount of urine passed daily ranges from eighteen to twenty-two ounces. The digitalis and squills ordered to be stopped, and no medicine except the compound spirit of juniper freely.

January 2, 1872.—Up to 22d ult. she was kept on juniper, and all the symptoms became much worse, and the quantity of urine decreased, ranging from eighteen to sixteen ounces. At date mentioned she was put again on scilla and digitalis, āā gr. vij a day. The urine has increased, ranging from eighteen to twenty-two ounces. Pills stopped; digitalis continued, gr. ij daily, and fluid extract of scoparius f℥j, every two hours, "eight doses per day."

January 2.—Patient much worse. Urine not passed so freely, daily amount ranging from sixteen to eighteen fluid-ounces. Ordered digitalis and fluid extract of scoparius.

January 31.—The digitalis afforded some relief, but the patient gradually grew worse, and died last night, profoundly dropsical and exhausted.

*Post-mortem.*—Cadaver very dropsical, skin intensely erythematous, sloughing: Two ounces of straw-colored fluid, without lymph, in pericardium. Heart enlarged, with the walls enormously thickened, its ventricles about normal in size, but its left auricle enormously dilated and hypertrophied.

*Semilunar valves.*—Aorta, with an elevated, rounded, hard ridge at base of each valve. Valves themselves nearly healthy, allowing with hydrostatic test slight reflux.

*Pulmonary valves.*—Normal.

*Mitral valves.*—Covered with vegetations of all sizes and shapes, rendering valves totally immovable, and nearly choking up the orifice.

*Tricuspids.*—Bound down by a recent white, fibrinous clot, not nearly so much diseased as mitral valves, but still with abundant, large vegetations.

*Abdomen.*—Very full of straw-colored fluid, with large quantities of recent lymph, without much injection.

*Kidneys.*—Normal.

# NOTES OF HOSPITAL PRACTICE.

## WILLS OPHTHALMIC HOSPITAL.

*SERVICE OF GEORGE C. HARLAN, M.D.*

Reported by CHARLES K. MILLS, M.D.

### *RETINITIS.*

Y. M., æt. 14, the day before applying to the hospital was struck on the left eye with an exploding fire-cracker. Examination of the injured eye showed considerable ecchymosis of the upper lid, moderate conjunctivitis, and a little blood at the bottom of the anterior chamber, probably from a rupture of one of the vessels of the iris. The pupil dilated irregularly, but freely, under the influence of atropine. The other eye was not sympathetically affected. Vision equalled $\frac{20}{CC}$.

By the ophthalmoscope the disk was found to be much reddened and the vessels dilated. Several small specks of extravasation were detected, and at the upper part of the retina there was a slight haziness from œdema.

The artificial leech was applied to the temple, sulphate of atropia, grs. viij to f ℥j, was instilled, and he was ordered a Seidlitz powder, and to be kept in a darkened room.

At the end of ten days, the ecchymosis and conjunctivitis had disappeared, and the blood in the anterior chamber was nearly all absorbed. Vision now equalled $\frac{20}{XXX}$, two-thirds of normal.

The ophthalmoscope now showed the disk slightly "choked," and the vessels tortuous and in some places interrupted. The œdema of the retina was not diminished.

At this stage Dr. Harlan prescribed iodide of potassium, grs. x, and the bichloride of mercury, gr. $\frac{1}{24}$, three times daily. An eight-grain solution of sulphate of atropia was also instilled in both eyes to insure complete rest, by preventing the patient from using even the sound eye.

The case still remains under treatment.

### *ANTERIOR STAPHYLOMA FROM SYPHILITIC IRITIS.*

M. M., æt. 22, acknowledged having had gonorrhœa six months before applying for treatment. She probably had had a chancre, but this could not be determined. Her appetite had been poor, and she had lost a little flesh, but she had not suffered from bubo, sore throat, or any affection of the mucous membrane of the air-passages. An eruption, probably syphilitic, made its appearance on her face and arms nearly four months after she first noticed an unhealthy vaginal discharge. She had no abscesses, ulcerations, or tibial nodes, and never had experienced pain in the long bones. She had had a mild form of psoriasis palmaris, which had not disappeared at the time of her admission; and she had had two bad attacks of orbital neuralgia a few days before this time.

About four weeks before coming to the hospital, her right eye began to inflame, and, although under treatment, it rapidly got worse, and presented a striking appearance when first seen. A large staphyloma anticum of the sclerotic had evidently existed for several days, having formed in the short space of three weeks from the date when her eye was first attacked. The staphyloma was probably due either to a thinning of the sclerotic and increased intraocular pressure, or to a gummatous deposit in the ciliary region,—the latter view being rendered more likely by a bulging forward of the iris, which gave to the pupil a deep-set appearance. The conjunctiva was much engorged, and the eye was intensely painful. Around the cornea the zonular redness was at first very marked; but while under treatment it gradually changed to a beautiful bluish tinge. The iris was adherent at several points along its pupillary margin, causing a slight irregularity of the pupil. Irido-cyclitis, in one of its worst forms, was holding full sway over this eye, the restoration of which was deemed hopeless. The patient came, in fact, to be treated for the left eye.

Two or three days before admission, her left eye had begun to be seriously affected. It presented decided symptoms of incipient iritis,—pain in the ball, slight darkening of the iris, episcleral zone, etc.

She was at once placed under treatment. An eight-grain solution of sulphate of atropia was instilled twice daily in both eyes. Inunction with mercurial ointment was ordered to be used daily, and quinine, with iodide of potassium and the bichloride of mercury, was given internally.

In two days after coming under treatment, the pain in the left eye had ceased, and in a week the right was also free from pain. She has now been in the hospital five weeks, with the above treatment and good diet: the left eye is entirely well, and even the right has much improved, all active inflammation in it having subsided.

### *ABSORPTION OF ORBITAL FAT.*

J. S. B., æt. 42, nine years since was struck violently across the nose and eyes with a heavy rope. The blow fractured his nose, and left him unconscious for five hours. The day after the accident, black spots appeared before the right eye, and its acuteness of vision began rapidly to diminish; at the time of coming to the hospital he had only a perception of light in this eye. Four months after the injury, the sight of the left eye became suddenly dim, and has remained without material change ever since, vision in this eye equalling only $\frac{20}{C}$, or one-fifth of the normal acuity, refraction being emmetropic and accommodation $\frac{1}{12}$.

A few days after the accident, the left eye began to sink in its orbit, and continued to do so until it reached its present peculiar condition: the orbital fat has been entirely absorbed, and the lids falling in have caused a deep sulcus above and below the eye. When the lids are raised, the anterior two-thirds of the ball can be plainly seen. The motions of the ball are limited in all directions but downwards. The patient can scarcely raise the pupil above the horizontal line.

### *SLOUGHING KERATITIS.*

H. M., æt. 24, six years before coming under the notice of Dr. Harlan had primary syphilis, and was still occasionally troubled with a stricture. Now and then for five years he had suffered from rheumatic attacks, and once he had had an eruption of red spots.

He never had any trouble with either eye until three days before coming to the clinic, when he went to bed in the evening feeling quite well, and awoke the next morning with the right eye painful and highly inflamed. He remembered having been exposed to a draught while he slept. He never to his knowledge had a foreign body in the eye.

When first examined, in addition to great conjunctival injection, lachrymation, and photophobia, he had a central ulcer of the cornea, and a slough about 2″ in length between the corneal layers immediately over the pupil. Vision equalled only $\frac{8}{CC}$, one twenty-fifth of normal.

A free incision, with a Graefe knife, was made in the cornea, and the slough removed, and after the operation atropia was daily instilled. The patient rapidly improved, the inflammation abating, and vision in ten days coming up to nearly one-half of its normal acuteness. He still reports.

*TWO CASES OF CONGENITAL MICROPHTHALMOS.*

G. M., æt. 17, had very small eyes, the corneal diameters being only four lines. The fat was entirely absent from both orbits. The lens of the right eye was cataractous, and vision in this eye only quantitative. The pupil of the left eye was clear, except a small white speck at the inner edge. The catoptric test showed three images, proving the presence of the lens. Acuteness of vision was one-fifth—$V = \frac{20}{C}$. When the accommodation was paralyzed by atropia, a convex lens of 3″ focus gave the best distant vision, showing a total hypermetropia of ⅓. Nystagmus was marked,—the eyeballs oscillating rapidly and almost constantly in a horizontal direction. This nystagmus and the contracted pupil prevented ophthalmoscopic examination.

Y. M., æt. 14, a brother of the last patient, presented a similar condition of the eyes as regards size, absence of orbital fat, nystagmus, etc.; and, in addition, he had convergent strabismus of the left eye, and in the right a good example of coloboma, having a fissure downwards in the iris. He had a manifest hypermetropia of $\frac{1}{9}$.

Several other members of the same family have serious congenital defects of the eye.

*NUCLEAR CATARACT.*

M. M., æt. 17, supposed that his eyes had always been in about the same condition that they presented when he applied to the hospital. He had distinct nuclear cataract in both eyes, the opacity of the lenses just occluding the pupil in moderate dilatation. The cataract did not present the yellow or yellowish-brown tinge of senile nuclear cataract, but was white, or, more strictly, grayish-white in color. After the eyes were placed under the influence of atropia, the peripheral portions of the lenses were discovered to be clear, with the exception of a few slender striæ. The fundus of each eye was found to be normal, being easily seen around the cataracts. The refraction of each eye was emmetropic, and vision in each equalled $\frac{20}{LXX}$, or two-sevenths. When the atropia was instilled, this vision was increased to $\frac{20}{L}$, or two-fifths.

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ELECTROLYSIS.—Drs. Beard and Rockwell (*Med. Record*, July 15) publish some of their results in the use of electricity in surgery.

In the treatment of erectile or vascular tumors, they claim for electrolysis the following advantages over the knife or other methods: there is no hemorrhage; there is no scar; by proper management, the effect produced is solely upon the blood in the tumor; the operation is easily performed.

In proof of this, they adduce cases.

I. A child æt. 8 months, with an erectile tumor in the cheek. Four needles introduced for eight minutes. A clot was produced, which was wholly absorbed in four months.

II. A large tumor in the back, in a weakly child æt. 1 year. Same operation. Result unsatisfactory, as some ulceration followed, and the tumor remained.

III. A child æt. 15 months, with a tumor near the angle of the mouth. Four needles introduced for ten minutes. In four months the tumor had disappeared, and no scar was left.

IV. A subcutaneous erectile tumor at the inner angle of the eye, in a child æt. 16 months. Three needles introduced for twenty minutes. Some sloughing occurred afterwards, and deformity was left. The authors think too strong a current was used, and for too long a time.

V. A child æt. 8 weeks, with a nævus on the neck, just below the chin. One needle introduced, and a sponge electrode applied externally, for four minutes. Two and a half months afterwards there were signs of reappearance of the growth.

VI. Bronchocele of four years' standing, in a girl æt. 14 years. External galvanization twice a week for two months failed. Needles introduced; in four months, after about twenty applications, a great decrease in size in the tumor.

VII. Fibrous bronchocele in a woman æt. 29. Satisfactory diminution in size from external galvanization, followed by the introduction of needles. Result not known, as she failed to report after three and a half months of treatment.

VIII. Large cystic tumor in the axilla of a nursing woman. External galvanism for a month, with some result. Introduction of needles eight times in the ensuing three months, with very great decrease in the growth. Final result unknown.

IX. Cystic tumor of forehead in a woman æt. 60. One application of the needles for five minutes successful.

X. Epithelioma of lower lip. "Mrs. J. C., æt. 65. In September, 1871, a little hard lump, the size of a pea, appeared on the left side of the under lip. By January 19, 1872, it had extended from the angle of the mouth along the lip to the median line. The surface presented a warty appearance, was exceedingly hard, and bled readily. Localized galvanization (external) dissipated almost completely the excessive pain in the diseased part. On January 26, five uninsulated needles were introduced into the lip, *around and beneath* the tumor, so as to entirely separate the healthy from the unhealthy tissue, and a current of considerable tension from eighteen cells was allowed to pass for twenty-five minutes. Equal parts of chloroform and ether were administered.

Inflammation and suppuration followed, and in two days the entire tumor had sloughed away.

By February 2 the inflammation had subsided, and the surface was covered with healthy granulations. Improvement continued until February 23, when the surface had entirely healed, and the patient was discharged as cured, with a well-formed lip.

XI. Large uterine fibroid. External galvanization to abdominal surface and os uteri used twice a week for nearly four months, with great relief of pain, and improvement of general health. One needle introduced into tumor (the other pole applied externally?) for fifteen minutes twice a week, for two months. Much decrease in size of tumor. Patient lost sight of.

XII. Indolent ulcer of the arm, in a woman æt. 40. Wet cloth connected with positive pole on ulcer, the negative pole being applied to some neighboring point. Entire healing in six weeks.

XIII. Syphilitic ulceration in a woman æt. 40. A needle connected with the positive pole was passed through the base of the elevation, and a current of moderate tension allowed to pass for a few moments. Pain relieved. After the third application, healing took place.

These interesting reports are to be continued.

DISLOCATION OF SPINE, WITH FRACTURE; REDUCTION WITH PULLEYS; RECOVERY.—The *Lancet* of March 23 contains the following remarkable case, with a reference to a similar one published in it, January 2, 1869.

J. M. G., a porter, aged 29, was admitted into the Southern Hospital, Liverpool, January 26, 1871, suffering from fractured spine. The accident occurred by a bale of cotton falling on his back while he was in a stooping position. The seat of fracture was about the fourth or fifth dorsal vertebra, and there was overlapping of the lower portion for about an inch.

Within half an hour after his admission, chloroform was given, and reduction effected by means of pulleys, traction being made on both thighs and on the chest, when the deformity disappeared. There was priapism after the reduction, and slight paralysis, and hyperæsthesia of the legs, which continued for about a fortnight. An opiate was given after the operation, and the acetate of ammonia as a simple febrifuge. The paralysis and hyperæsthesia gradually disappeared, but he suffered considerably from pain over the right side of the sacrum and the gluteal region, which was relieved, after morphia subcutaneously and blisters had been tried, by the application of Corrigan's heated iron.

He was discharged, cured, May 7, 1871, and was shortly afterwards able to do the ordinary work of a porter, suffering merely from slight angular curvature of the spine.

DEATHS BY LIGHTNING.—The present summer has been remarkable, among its other meteorological features, for the number of deaths by lightning which have occurred. Several persons have lost their lives in this way in Philadelphia, and almost every newspaper contains advices of such accidents in various parts of the country. It would be interesting to ascertain, if possible, the exact relation of the electrical phenomena of this season to the great and continued heat.

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## EDITORIAL.

### REORGANIZATION OF THE AMERICAN MEDICAL ASSOCIATION.

WE believe we express the opinion of the majority of the thinking men in the profession in this country, when we say that the American Medical Association has lamentably failed to accomplish the great ends which its projectors had in view. It is not, and never has been, in any sense, a body representative of the medical men of America; it has not now, and never has had, any power either with the medical schools, with the profession, or with the public. As the result of the combined efforts of the delegates, this mountain is every year, like an Irish laborer's wife, delivered of a large and very homely infant, in the shape of a volume of Transactions, which is never read after it leaves the printing-office.

Neither in its meetings nor in its publications, then, does the Association wield any influence, *because* it is not representative of anything; for herein, we believe, lies the root of the trouble. Can it be doubted that the moral and intellectual force of the medical profession in this country, if put forth through a medium which should concentrate and fairly express it, would command respect wherever its influence reached?

In the *Boston Medical and Surgical Journal* of July 25, we find a plan so strongly commending itself to our favor, that we desire earnestly to call the attention of our readers to it. After mentioning some suggestions previously made in the *New York Medical Record*, viz., That the Association should hold its sessions with closed doors, that delegates should serve for longer terms, that the committees should be larger, and chosen more fairly, and that the Transactions should be abolished,—these suggestions the writer in the *Boston Journal* thinks might in time be carried out, after the following plan of organization has been put into thorough working order.

"In future, then, let the Association have, or rather consist of, a working Board, a true representative body, of limited numbers, membership in which shall be the reward of professional ability, usefulness, and eminence. Two from each State would be a sufficiently large number for all practical purposes. Let this Board be called the National Council of the American Medical Association. Let this Council meet once a year at some convenient place, say Washington, or as the Board might from time to time determine, and continue in session sufficiently long to attend to all legitimate business, scientific and professional, everything, in fact, in the interests and needs of the profession throughout the Union—giving such advice, recommending such rules, issuing such 'Transactions' as would be for the elevation and advancement of the whole profession. Let the term of service for these two National Councillors be six years,—one to be chosen every three years; and, to place them as much as possible above temporary influences and purely local interests, let them be chosen by a State Council, which, for this and other duties, may be constituted and elected as follows:

"Let each of the several State Societies choose from its most experienced and best-qualified men a number equal, say, to that of the State's Representatives in Congress (one-third each year), and, as far as convenient, to obtain representation of all parts of the State—one from each Congressional District. Let these hold office for three years, and form what may be called the Local or State Council of the American Medical Association. They could meet yearly, or oftener if found useful, to consider, primarily, professional matters which in the State are, or may be, of National concernment, and to make selections of such as should be carried before the National Board—in short, to do all the work of a State Committee. Each of these State Boards should, once in three years, choose one of the National Councillors, as before mentioned, from their own Board or at large, wherever the best qualified could be found. As in these State Boards the chief preparative work should be done, while its revision and completion should be left to the sober judgment and more deliberate action of the National Board, the National Councillors might have seats in the State Board—without vote—in order that they might know all the arguments and circumstances relating to any case, and the wishes of the State Board, in full, to guide their own action in the National Board.

"The numbers in the several State Boards would be sufficiently large and well proportioned. For a national council seventy or eighty, thus selected, would be ample; and the length of the term of service would enable them to preserve a continuous and consistent plan of work, while half of their number coming new every three years would prevent any lapsing into indifference or negligence. The influence of the State Councils, as indicated, most fully impressing their own wishes and the wishes of their immediate constituents on individual National Councillors, would, though the National Board, give a voice to the profession such as was never before known. It is not necessary to give other details at present; such could be easily wrought out, the plan itself being quite feasible.

"As for 'ways and means,' such could be arranged for without difficulty. The addition of a dollar (or even half of that sum) to the annual assessment in the State Societies, would give more than enough for all expenses, including, if thought best, mileage and pay of the National Board while in session.

"Should the plan work successfully, as we have no doubt it would, eventually the State Societies might, if then thought advisable, without changing name or management in any other respect, become branches, and their Districts sub-branches, of the National organization, retaining all the desirable features now possessed; and thus give to each of their members an additional bond of union with the whole profession in the country, and an additional *title* to the respect of the community at large.

"In such event, the National Council could arrange for general meetings (every year or second year, and in different parts of the country) for all members who might choose to attend. At these meetings there might be orations in medicine, in surgery, and in other departments, reports, communications, discussions, and consideration of other matters of professional interest; while all the evils of the present organization would be avoided, by the exclusion of all matters of business or control, which would continue in the hands of the National Council, and not be agitated at any of these general meetings.

"Under such a system as we have described, there would be no difficulty in getting the right men for these right places for them. To be a member of the State Council would be worthy of the laudable ambition of any aspiring physician; to be one of the National Board would be held by all as the highest professional honor the profession could confer upon eminent talent and well-tried fidelity to its interests.

"Under such a plan the American Medical Association would soon become 'a power' in the land, and connection with it, even as a member merely, an object of just pride with every high-minded and well-educated practitioner throughout the country."

## PREVENTABLE DEATHS.

AS conservators of the public health, the medical profession cannot but be concerned in the abatement of every cause of disease or injury, or of the shortening of human life. We are not therefore going out of our province in calling attention to several crying evils which exist in this city.

Twice within a month, in one manufactory, have employés lost their lives by becoming entangled in the machinery.

Not long ago, two men were killed, and one or two others injured, by the falling in of a floor in a building undergoing alteration. Those in charge of the job "thought" there was no danger; they should be held responsible for not making it certain.

Poisons are dispensed and sold in most apothecary shops without any other precautions than such as the proprietors choose to take.

Unripe and over-ripe fruits are sold at every street-corner, to the imminent peril of children and ignorant persons, who buy them because they are cheap.

Cattle are driven through the streets at all hours of the day, and scarcely a week passes without the record in the daily papers of injuries sustained by one or more persons by "mad steers."

All these abuses might be in great measure remedied by fixing the responsibility upon those to whom it belongs. Many "accidents" are in reality the legitimate results of criminal carelessness,—a carelessness fostered by the fact that there exists no law for its punishment, or that if there is such a law it is not enforced. We call upon the profession everywhere, without fear or favor, whenever opportunity offers, to do what they can to protect the public interest in this regard.

## SCHOEPPE'S NEW TRIAL.

HOWEVER unworthy "Dr." Paul Schoeppe may be of professional brotherhood (and his record is certainly extremely bad), it is very much to be hoped that his new trial will be conducted on different principles of medical jurisprudence from those which governed the court at his previous arraignment. The absurdity of convicting a man of murder without proving that a murder was committed, seems to need no demonstration.

If the commonwealth cannot produce positive evidence that Miss Stennecke died of poison, no matter how strong the suspicion may be, no matter where the imperfection in the proof may lie, the Scotch verdict "not proven" would be the proper one. We are not sure that the judge would not be warranted in refusing to let the case go to the jury, if there should be a manifest failure on the part of the prosecution to make out this main point.

## KITCHEN GARBAGE AND OFFAL.

SOME time ago, the Board of Health made a raid upon the pig-sties on the outskirts of the city, and thought they had done a praiseworthy work in abolishing them. Soon, however, complaints arose that the "slops" (the Philadelphian term), no longer collected for consumption by the pigs, accumulated and became extremely offensive.

To do away with this evil, it appears that the Board have contracted for the removal of the garbage by "strong, tight, and securely covered" carts and wagons, "so driven and managed as that none of the contents thereof shall fall, or leak, or spill therefrom." The drivers are to "give adequate notice, by the ringing of a bell, to the occupants of all buildings such carts and wagons are about to approach," etc. etc.

Garbage is to be removed daily through July, August, and September, three times a week in October, and twice a week in November and December; of the other six months, from January to June inclusive, nothing is said—and we suppose that means that in them nothing is to be done.

Despite the lawyer-like redundancy of these regulations, we cannot but remember the sad fiasco that the Board made in the matter of the street-cleaning, and shall look with interest, not untinged with doubt, for the result of their efforts in this new field.

# TRANSLATIONS.

## THE TREATMENT OF ECLAMPSIA.

### BY JAQUET,

of Berlin.

*Translated from the German by W. C. Kloman, M.D., of Baltimore, Maryland.*

AS is known, we are not yet agreed whether eclampsia (according to Frerichs and Litzmann) is the result of poisoning of the blood by urinary constituents or by products of their decomposition, and therefore a symptom of uræmia; or whether (according to Traube and Rosenstein) it depends

upon an acute œdema with consecutive acute anæmia of the cerebrum, and especially of the mesocephalon. The view that the eclamptic convulsions are to be regarded as purely reflex, to which the act of parturition is the reflex-exciting irritant, has been set aside, since we know that eclampsia may break out independent of parturition, as well during pregnancy as during the puerperal state. Dr. Courvoisier has recently (1867) proposed the decrease in the amount of albumen contained in the blood as the direct cause of the convulsions. The decrease of the albumen of the blood, which albumen the brain is said to need particularly for its normal functioning, is adduced as explaining especially the delayed eclampsia which occurs during the puerperal state, when the poverty of the blood has reached its highest point, just as it produces the convulsions which are observed a short time before death by hemorrhage.

Now, concerning the first two of the above-mentioned theories of the production of eclampsia, and first of all the *uræmic form;* besides the albuminuria, a retention of organic compounds, destined for excretion, is said to occur and make the blood uræmic, when in a pregnant woman the normal secretion of urine is suppressed or in a great measure limited, from whatever cause,—be it in consequence of a diseased condition of the kidneys, as congestive hyperæmia, a catarrhal or parenchymatous inflammation of them, or in consequence of a compression of the ureters by the gravid uterus. The blood, according to the views of the various investigators, receives the toxic property from the admixture of urea, carbonate of ammonia, and creatine, or creatinine. Yet the upholders of the uræmic theory at the present day regard the *carbonate of ammonia* only as the noxious agent, as Frerichs first proposed. According to the other view, that of Rosenstein, the eclampsia is produced in pregnant women in the same way that Traube explained the occurrence of nervous symptoms in uræmia; *i.e.*, when, in a person that is hydræmic in a high degree, the pressure in the aortic system is suddenly increased, there occurs an acute œdema of the brain; the exudation of serum compresses the blood-vessels, and there is acute anæmia as the result. If this alteration only affects the cerebrum, coma is said to arise; if it extend to the mesocephalon, convulsions take place. These two conditions, hydræmia and increased arterial pressure, are in fact present in every parturient female, and the former in every pregnant female; for if we compare the analysis of the blood of pregnant females, instituted by Regnault and Devilliers, with that of non-pregnant persons, we find in 1000 parts of normal blood, 791 water, 127 blood-corpuscles, 70 albumen, 3 fibrin, and 7 to 12 of soluble constituents; while in the blood of pregnant females, in 1000 parts, there are 810 water, 111 blood-corpuscles, 66.5 albumen, 3.5 fibrin, and 9 parts of salines. The blood of pregnant females, therefore, contains more water and fibrin, and less blood-corpuscles, albumen, and salts; in short, as the decrease of blood-corpuscles altogether concerns the red ones, while the white ones are not only relatively but indeed absolutely more abundant, the blood is hydræmic, or chloroanæmic. If, as is the fact in by far the great majority of cases, albuminuria is superadded to the physiological hydræmia, the impoverishment of the blood must attain a very extraordinarily high degree, and at times it needs but a very slight cause to suddenly increase the pressure in the aortic system in such manner that œdema cerebri is produced. Generally, but by no means always, this increase takes place in consequence of the labor-pains, and becomes very considerable after the draining off of the liquor amnii, as then the bearing-down efforts begin.

In the next place, the author, without supporting either one or the other theory, discusses the therapeutical measures recommended by him, which he considers perfectly rational, as well in eclampsia caused by uræmia, as in that caused by acute anæmia. For those who assume uræmia as the etiological force, if they would content themselves with fulfilling the therapeutics of the *indicatio causalis*, might theoretically seek to attain this object in three ways, namely: (1) by preventing the formation of carbonate of ammonia, (2) by neutralizing it and thus making it innocuous, and (3) by striving to remove it instantly from the body.

But the first measure may not be fulfilled before the eclampsia has a fatal termination, and so much the less, since at the present time the place of formation of the urea, as well as the conditions under which it is converted into carbonate of ammonia, are nearly unknown to us. The attempts to carry out the second measure have likewise been fruitless, as benzoic acid, which was recommended by Frerichs for this purpose, in its course through the organism, is not able to combine with the alkali and render it innocuous, but again makes its appearance as an acid,—namely, hippuric acid. The only expectation of results must therefore be placed in the efforts by *which the carbonate of ammonia can be removed from the blood.* It may well be assumed that this is to be accomplished in the same way in which the urea leaves the organism under normal circumstances, the kidneys and the skin. Both of these organs have almost the same physiological purpose; both excrete water and salts from the body, with only the slight difference, that the kidneys do this incessantly and with tolerable uniformity, and the skin simultaneously regulates the bodily temperature. Each of the two organs undertakes the office of the other, as promptly as this is possible in the animal economy. As soon as the cutaneous activity is suppressed by remaining in a cold atmosphere, the human being urinates more frequently and more abundantly, and when the urinary secretion is entirely suppressed, as in the later stage of cholera, we observe the skin covered with appreciable amounts of crystals of urea at the outlets of the large sweat-glands upon the forehead and nose. Even benzoic acid reappears in sweat as hippuric acid. Hence, where one of the routes, designed for the excretion of urea, has been blocked up, as in uræmic eclampsia, it is certainly rational to attempt the other. This necessity has long since been recognized in the therapeutics of diffuse nephritis and the energetic production of sweat made use of; on the other hand, this has not been sufficiently employed in the treatment of eclampsia.

According to the theory of Traube and Rosenstein, the indications for treatment are (1) the removal of the acute œdema, and (2) the lowering of the aortic pressure. The first object is, as a matter of course, attained by the *abstraction of water.* As the kidneys are not to be depended on, for evident reasons, and it is not in our power to excite pulmonary activity, we are compelled to make use of the *intestinal canal and the skin* for this purpose. As long as the kidneys are only in the condition of hyperæmia, and have not undergone Bright's degeneration, we might certainly act upon both simultaneously without hesitation. But in most cases, when the patient lies comatose and no longer swallows, we cannot make use of internal purgative remedies, and are therefore restricted to the use of enemata and diaphoresis. And the latter, as regards the abstraction of water, in all cases entirely fulfils what is required of it. While ordinarily the body, principally by the evaporation of water, daily loses about $\frac{1}{87}$ of its weight by way of the skin, we can at pleasure artificially increase this amount almost eight times. Now, concerning the lowering of the aortic pressure, its intensity depends upon three factors: (1) upon the strength of the heart's beat, (2) upon the fulness of the vessels, and (3) upon the abundance of the flow towards the capillaries, and the quantity of the secretions.

Everything that weakens the heart's action, diminishes the contents of the vessels, and causes the blood to flow more readily towards the capillaries, reduces the arterial pressure. There is not time allowed in an affection running such an acute course, to give digitalis, since this remedy, as is known, only develops its permanent effects after about twenty-four hours. Venesection is still frequently recommended and employed for reducing arterial pressure, and in fact is decidedly the most reliable measure for this purpose. But if we consider that, upon the one hand, the amount of water lost from the blood, which is the special object here, is already replaced after a half-hour, or at most after a few hours, and, upon the other hand, that the hydræmia is increased thereby to a considerable extent, we shall rarely decide to employ venesection, if we have another remedy in view, which, although it does not act so rapidly, is just as certain. Finally, touching the third way by which we can moderate the aortic pressure, namely, to reduce it by increasing the fulness of the capillaries, this has hitherto been but seldom attempted in the treatment of eclampsia, and yet in the skin we have an organ which is at once abundantly supplied with capillaries and readily accessible to therapeutic interference; the excitation of all the natural secretions, and especially that of the skin, must

certainly reduce the aortic pressure, as the filling of the vessels is reduced to the lowest degree by the continuous abstraction of water.

Accordingly, from a theoretical stand-point of all the methods of treatment, a *vigorous diaphoresis* appears to fulfil the causal indication most fully, as it excretes the carbonate of ammonia from the blood, as well as removes the acute œdema of the brain, and, finally, also reduces the pressure in the arterial vessels.

Now, it is known that eclampsia begins much more rarely after the expulsion of the child than before it, and that in this case it runs a favorable course, because, as Winkel says, "the increased pressure in the aortic system, *post partum*, is generally soon equalized by abundant perspiration and the decided increase of diuresis." Furthermore, among the class of ordinary people we see eclampsia occur to a certain extent epidemically in cold, damp weather, after taking cold, therefore after the sudden suppression of cutaneous activity. Finally, in the clinical history of eclamptic patients with a favorable termination, no matter how they have been treated, we generally note the remark that "the convulsions abated with the breaking out of a profuse perspiration." Even in the case successfully treated by Bellina by means of transfusion, this fact is prominently brought out. Hence the opinion, that in all these cases the breaking out of perspiration does not only accidentally accompany the favorable change, but has actually occasioned it, may not appear to be too hazardous.

For the purpose of exciting the secretion of sweat, the author makes use of the wet packing of the whole body, as employed by Priessnitz. For its application, we need a woollen blanket which is at least seven feet long by six wide, so that the entire body can be completely enveloped. This is spread out upon an ordinary bed, and upon it is laid a sheet of the same size, dipped in cold water of 72.5° F. (18° R.) and then well wrung out. The patient is laid upon this and wrapped in the sheet, and then firmly enveloped in the blanket. The head remains free, and is covered with a bladder of ice or a cold compress. The chest must not be constricted, but it will be well to keep the legs close together. If labor-pains have already begun, and especially if dilatation of the os uteri is well advanced, it will be necessary to wrap the legs separately, so that we need not unwrap the body for the delivery, which latter, if it should cause a sudden suppression of the sweat, will readily cause a renewal or increase of the convulsions. The effects of this mode of wrapping are as follows: during the first two to five minutes, the blood recedes from the periphery to the interior of the body; the skin then appears pale. Ten minutes afterwards, a delightful warmth sets in; the skin reacts to the irritation of the temporary cold, and becomes intensely red. After an hour the secretion of sweat begins, without being preceded by an unpleasant feeling of heat or congestion to the head, such as we commonly observe in perspiring in a dry medium. The want of this phenomenon during the employment of wet wrappings is explained by the fact that water is a better conductor of heat than air, and therefore prevents an unpleasant accumulation of heat in the body. The perspiration now lasts as long as the patient remains wrapped up; it is most profuse during the first three or four hours, but then gradually diminishes. After a few hours, the perspiration amounts to one or more pounds. The convulsive seizures diminish in number and intensity very soon after the breaking out of the sweat. The loud snoring between the paroxysms ceases, and the patient falls into a quiet sleep. Nevertheless, the activity of the pains continues undisturbed, and hence we can allow the patient to lie quiet in her wrappings until delivery has been accomplished. Crampy pains, which are not unfrequently met with in the course of labor in eclamptic patients, seem to be prevented in general by the use of this treatment.

The author has treated eight cases of eclampsia in this manner in his clinic, and with thoroughly satisfactory results. The good effect of the wrapping was unmistakable in all, and several times a favorable result, which had not been attained in spite of the administration of various remedies recommended by others, was due to its employment alone.

The author leaves undiscussed the question, whether the curative effect of the wrappings is to be explained by their antagonism to the etiology of eclampsia, or whether besides this they also have an antispasmodic action, as in chorea and tetanus, according to Ebert's experience. According to the author, they act in a perfectly innocuous manner under all circumstances, and are as well suited for treating the eclampsia of pregnancy as for the forms occurring during parturition and in the puerperal state. The natural course of pregnancy is *not* interrupted by wet wrappings, as we see in the hydropathic treatment of pregnant females with typhus, where they have been used several times in succession at short intervals. An injurious effect is just as little to be dreaded from them in the puerperal state. Finally, their employment does not exclude the use of other remedies, as chloroform inhalations, subcutaneous injections of morphia, and enemata containing chloral hydrate.

Prof. Martin confirms the statements of Jaquet, and asserts that he has long regarded *acute œdema* of the brain as the cause of eclampsia. This œdema can be produced by suppression of cutaneous activity, like common œdema in renal diseases. In this respect damp cold has a peculiarly unfavorable effect upon cutaneous activity. He has several times seen eclamptic seizures occur in pregnant females with and without œdema, after staying in cold rooms or after working in cold water with the arms. In regard to the therapeutics, Martin was led to seek to awaken the cutaneous activity, and especially to the employment of wet wrappings, by the following case, which he observed three years ago.

A vigorous and healthy pregnant female, in the lying-in hospital, had taken cold in rinsing clothes, and during the normal course of delivery, upon the entrance of the head into the lower strait, had an eclamptic seizure, which was followed by a number of others after the termination of labor. In spite of the administration of diaphoretics, the temperature of the very much reddened skin rose to 102.2° F. After the extremities had been wrapped in wet cloths, the attacks ceased, and convalescence followed.

Martin regards this treatment as one very much to be recommended, especially together with the use of chloral hydrate in the form of enemata, as also of chloroform, opium, and morphia. He takes occasion to remark that operative interference during labor, if not otherwise indicated, appears injudicious to him, if it does not terminate the labor without causing great pain.

## REVIEWS AND BOOK NOTICES.

ON FOOD: its Varieties, Chemical Composition, Nutritive Value, Comparative Digestibility, Physiological Functions and Uses, Preparations, Culinary Treatment, Preservation, Adulteration, etc. Being the substance of four Cantor Lectures delivered before the Society for the Encouragement of Arts, Manufactures, and Commerce, in 1868. By H. LETHEBY, M.B., M.A., Ph.D., etc., Professor of Chemistry in the College of the London Hospital. Second Edition, Enlarged and Improved. 12mo, pp. xvi., 255. New York, William Wood & Co., 1872.

As we see from the title of this book, it is intended to embrace between its covers a large amount of information. It presents a mass of gleanings from many sources. It cannot pretend to be original, but shows the results of much careful reading. The value of such a work would be greatly enhanced if implicit confidence could be placed in everything that is announced as a fact; but, unfortunately, our author, like the rest of mankind, is not infallible; for instance, on page 17, in a really important chapter on the nutritive value of various articles of food, we find the following paragraph in the article upon Indian Corn:

"*The grain is said to cause disease when eaten for a long time and without other meal, the symptoms being a scaly eruption upon the hands, great prostration of the vital powers, and death after a year or so with extreme emaciation. These effects have been frequently observed among the peasants of Italy, who use the meal as their chief food; and the sallow, weazen look of the natives of the Northern States of America is thought to be due to the indigestible preparations of Indian corn called mush, hominy, or johnny, which constitute the chief portion of their daily meals.*"

The existence of such assertions as the foregoing must raise doubts in the reader's mind as to the amount of credence to be given to anything that he may find in the book; but, after making all allowance for such errors, the work still remains of very great value, and contains much information that is necessary to the physiological physician, and to obtain which would, without the possession of this little volume, cost much time and research.

In considering the nutritive value of food, a series of tables are given showing the proportions of nitrogenous and carbonaceous principles; and in arranging the relative values, both of these, as well as the cost, are considered.

The article on the functions of nitrogenous food and the source of muscular power is the result of prolonged observation and thought, and contains several new ideas. None of the recent researches in the physiology of food are noticed, and American observers are entirely ignored. A few interesting observations and deductions are given respecting the choice of food by different nations and classes of workmen, and the effects of the food upon their powers and characters are given.

DISEASES OF THE THROAT: a Guide to the Diagnosis and Treatment of Affections of the Pharynx, Œsophagus, Trachea, Larynx, and Nares. By J. SOLIS COHEN, M.D., Lecturer on Laryngoscopy and Diseases of the Throat and Chest, in Jefferson Medical College, Philadelphia, etc. etc., 1872. 8vo, pp. 582, with 133 Illustrations. W. Wood & Co., New York.

A most thoroughly practical work, bearing upon every page unmistakable evidences of the author's acute powers of observation and the zeal with which he has prosecuted the study of laryngoscopy ever since its discovery. The term "Diseases of the Throat" is not restricted, as ordinarily, to affections of the larynx and trachea, but is made to comprise those of the contiguous parts—œsophagus, pharynx, and nares. It is on the latter subjects, especially, that the author furnishes the reader with much new and original information, besides presenting the views of others collected from various inaccessible sources.

In the preliminary chapters will be found, discussed in a clear and concise manner, the various methods of making the examination of the throat, whether by laryngoscopy or autolaryngoscopy, demonstro-laryngoscopy, infra-glottic laryngoscopy, œsophagoscopy, or rhinoscopy. There will be found illustrations of the various appliances requisite for the examination, be it made by direct or reflected light,—sunlight or artificial illumination. The author gives a decided preference to some form or other of Tobold's condensing apparatus. The anatomical and histological descriptions of the larynx, without being very elaborate, give all the most important and latest researches in this direction.

The succeeding chapters are devoted to the consideration of "sore-throat," the exanthemata, diphtheria, syphilitic sore-throat, of adults—of infants, membranous sore-throat; as to the latter affection there often must be some doubt as to its nature, even with the aid of the laryngoscope, hence the author recommends that "the safest plan for the practitioner would be to treat it as if it were diphtheria." "There is nothing to be lost if the case should turn out to have been only common membranous sore-throat; and everything will have been gained should it turn out to be diphtheria." Dr. Cohen holds the view that diphtheria is of a parasitic origin, and that it is essentially a poisoning of the blood. The use of parasiticides is strongly recommended; sulphurous acid water, in the form of spray, applied every few hours, being most highly extolled. Carbolic acid has also been found very efficacious.

Special affections of the tonsils, of the palate and uvula, of the frontal sinus, form the topics of several very interesting and instructive chapters; but want of space compels us to hasten on to a brief notice of Chapter X., "special affections of the pharynx," one of the best and most carefully prepared articles in the entire volume.

A veritable *terra incognita* is opened up here to the eyes of the profession, in the descriptions of the adenoid tissue of the vault of the pharynx and of the *bursa pharyngea*. The illustrations from Luschka are admirable.

Glandular hypertrophy at the vault of the pharynx, and the frequently resulting true adenomata, are comparatively new subjects, first pointed out by Meyer of Copenhagen. The fossa of Rosenmüller is frequently obliterated by a mere inflammation of the mucous membrane, or as a result of hypertrophy of the glandular tissue.

The unique views of the orifices of the Eustachian tubes, and of the glandular tissue at the vault of the pharynx, as given in several cases of cleft palate, will, no doubt, be of the greatest aid to the student in forming a conception of the anatomical relations of these parts.

Frequent allusion is made to the liability of diseases invading and spreading along the Eustachian tube. "Inflammation of the pharyngeal mucous membrane covering the tube may be very easily propagated around its edges into the interior of the tube, and thus lead to deposits and accumulations of mucus or lymph, which by their mere presence, or by producing organic obstruction, prevent a maintenance of due atmospheric pressure on both sides of the tympanic membrane, and thus lead to impairment of hearing, from disease of the tube or of the middle ear itself."

Retro-pharyngeal abscess, as an affection, occurs most frequently in children; it is apt, from the similarity of some of the symptoms, to be confounded with croup: the following is given as the basis for a differential diagnosis.

"The existence of an abscess of this kind may be suspected in a child when attacked by frequent suffocative paroxysms, similar in many respects to those encountered in croup, but not exhibiting the same distinctness of remission. The restlessness of the patient, and the actual obstruction to respiration, is said to be greater than that witnessed in croup; and the relief to respiration afforded by the sitting posture may be taken as another indication of the nature of the disease. The voice is not affected as it is sometimes in croup, there being no impediment to the free vibration of the vocal cords. Pressure upon the parts always produces pain, which is not the case in croup," etc., etc.

The next chapter is devoted to the subject of affections of the œsophagus, and is remarkably complete. Chapter XII. treats of the affections of the nasal passages. It is to be regretted that the author has not entirely abandoned the meaningless "ozæna," a term merely denotive of a characteristic symptom.

Thudichum's nasal douche is frequently recommended: "care must be taken that the solution be warm, and of a specific gravity near that of the blood."

Excitation of the Schneiderian membrane by the passage along it of the constant galvanic current has proved very successful in cases of anosmia.

To Dr. Cohen belongs the credit, if not of discovering, at least of first calling the attention of the profession to very remarkable and not very rare instances of sub-mucous infiltration at the sides of the vomer, which, when viewed rhinoscopically, from their position and whitish color, might be very readily mistaken for polypi. Incision into the swollen mucous membrane, or even excision and cauterization of the edges, must often be resorted to in this obstinate affection.

A great deal of space is of course devoted to the affections of the larynx and trachea, together with full descriptions and illustrations of the most approved laryngeal apparatus that is required in their treatment.

"The author discards altogether the notion of any distinct disease to be called *laryngeal phthisis*, whether it be the tuberculous ulceration of the laryngeal mucous membrane, . . . or whether it be the extensive ulcerative chondritis and perichondritis of the older authors. It is altogether doubtful if ever a case existed in which tuberculous disease was confined to the laryngeal structures."

Dr. Cohen differs from Mackenzie and others, who hold that both phthisis and syphilis appear to exercise a decidedly antagonistic influence to the development of new formations. He claims to have met with a large proportion of cases in which distinctly-formed growths, of circumscribed outline, and often of tolerably large size, existed in cases of phthisis. In a table of sixty-six cases occurring consecutively in the author's private practice during the last five years, eight cases are put down as distinctly traceable to syphilitic congestion of the laryngeal structures, and twenty-two tumors occurred in

patients with phthisis. The greater number of these laryngeal new growths occurred in the male. The period of life at which they were observed most frequently is perhaps between twenty-five and forty-five years of age. Papillomata are by far the most frequent variety; forty-eight of the author's sixty-six cases were judged to be of this character. The papillomatous growths of phthisis are said to be very apt to recur, their favorite seat being upon the intra-arytenoid folds; when thus situated, and in phthisical cases, it can be no easy matter to determine whether they are merely the harmless papillomata, or whether they are not the fimbriated and œdematous margins of some hidden meso-arytenoid ulcer.

Appended to the volume are very copious references upon subjects treated of in the text, admirably arranged under "catch-heads:" it is certainly the most complete and convenient mode of reference ever devised.

We hope that the foregoing extracts will have been sufficient to give the reader some idea of the book, and that it may have interested him sufficiently to induce him to a careful perusal of it. In conclusion, we cordially recommend it as the best treatise extant on the subject. To facilitate the study of the rhinoscopic and laryngoscopic images of the various pathological conditions, we hope to see in subsequent editions the substitution of chromo-lithographs for the less satisfactory woodcuts.

LECTURES ON THE PRINCIPLES AND PRACTICE OF PHYSIC. By Sir THOMAS WATSON, M.D., F.R.S. From the Fifth Revised and Enlarged English Edition. Edited, with Additions, etc., by HENRY HARTSHORNE, A.M., M.D. 2 vols. 8vo, pp. 1872. Philadelphia, Henry C. Lea, 1872.

A work of such world-wide celebrity needs at this late day but few words of criticism. It has for so many years occupied a deservedly prominent position as a text-book for the guidance of the student and the practitioner, that its merits are generally known and need not be again enumerated. The American editions have seemed to demand occasional additions to the original text, to adapt them to "the different aspect of some diseases upon this side of the ocean, and the greater relative importance of certain topics," and we therefore find incorporated in the present volumes not only most of the comments and remarks of Dr. Condie in the American edition of 1858, but also annotations by Dr. Hartshorne, and references to American theories and modes of practice. The charm of the author's lectures has always been the beauty, terseness, and elegance of the language employed. We are glad, therefore, to find, as stated in his "Epilogue to the Reader," at the end of the second volume, that he has felt unable, and indeed unwilling, to recast, in his study, their style and character. "I have," says the writer, "fed the pleasant fancy that I was still sitting in the Professor's chair, with my flock of juvenile students before me." This, as he himself remarks, has led to anachronisms, which are, however, easily detected by the English reader, and have been generally commented upon in the American edition.

The work is issued in the best style of its publisher, being much more satisfactorily perused and referred to in its present two-volume edition.

LEHRBUCH DER GEBURTSHÜLFE. Von Dr. KARL SCHRÖDER: dritte neu durchgearbeitete Auflage. Bonn, Cohen & Sohn, 1872.

(MANUAL OF OBSTETRICS. By Dr. KARL SCHRÖDER. Third Revised Edition. Bonn, Cohen & Son, 1872.)

The translation of Niemeyer's Practice, Stricker's Histology, and Rindfleisch's Pathological Anatomy, has done much to make the profession in this country familiar with the most advanced views in these special branches, as developed by the most prominent of the German medical authors. With regard to obstetric teaching, however, we have been obliged to rest content with imperfect translations of short articles, and modified theories as presented to us by English authors, with scanty recognition of the source from which they were obtained. One reason for this is the fact that for some time past the best original work in this special branch has been scattered through the different magazines and archives, or has appeared in the form of fragmentary publications, so that the names of those who have really done the most to advance the science of obstetrics are scarcely known outside of Germany. Hence it was, that until the appearance of Prof. Schröder's book, Nägele's Obstetrics, written nearly thirty years ago, still held, beyond doubt, the first place, and, with the addition of Dr. Greuser's foot-notes, represented the present stand of obstetrical teaching, regarded as a whole, better than any work written within the last ten years. For, strange to say, each new author, and they were numerous, ignored the fact that great and important advances had been made in physiology and pathology, which rendered a complete revision of transmitted theories absolutely necessary, and the result was the successive production of text-books, such as Scanzoni's, Hohl's, Braun's, Martin's, Lange's, and many others, each one of which contains valuable suggestions and improvements in the mechanical portion of obstetrics, so that the mere mention of any one of these names suggests at once to any one familiar with the progress of this branch, some new instrument, or valuable modification of those already in use, or the development of some special operation; but no one of these men ventured to leave the beaten track, and construct a text-book which should represent the present state of the science of obstetrics.

This Schröder has done, and of necessity, inasmuch as the experimental study of the Physiology and Pathology of Gestation and Parturition is of recent growth, his work cannot be a finished whole, but must present many gaps and spaces, of the existence of which the author confesses himself painfully conscious. No attempt is made, however, to conceal the wanting facts and observations, but the attention of the reader is rather drawn to these points, so that he too may participate in the pleasure of contributing by his own individual observation to the completion of the science as a whole. This spirit pervades the whole work, and the interest of the student is constantly awakened by new suggestions and subjects for original research. In order, however, that special investigations may not be undertaken without the knowledge of how much has already been accomplished, and how much remains to be done, each chapter is introduced by a full list of the German and foreign literature on the subject, while, in many cases, abstracts of the views of the most prominent writers on questions which are still undecided are introduced in small type, to avoid confusion. The general division of the book into physiology and pathology has not been rigorously adhered to; in several chapters, when the author has felt that a practical advantage could be gained by grouping together certain conditions which have a common symptom, depending, however, upon a different cause, he has not hesitated to avail himself of this method of treating the subject: for instance, hemorrhage becomes so important and vital a symptom, that, in order to present to the student a clear and sharply-defined clinical picture of its value, this symptom is considered separately as occurring before, during, or after labor. So, too, that entire group of symptoms, affecting lying-in women, and having in common their septic origin and tendency to a pernicious course, are considered under the head of puerperal fever, and there results an admirable description of the clinical history and pathological anatomy of this terrible disease.

In the portion of the work devoted to operative obstetrics, the indications for each operation, its comparative danger to the mother and child, and the time of operating, are carefully considered; the description of the various instruments and the details of the operation are given, however, with great brevity. The explanation of this is found in the fact that in all the German schools attendance on practical courses on operative obstetrics is required, before the student is allowed to register his name among those to whom the cases which occur in the wards and the Polyclinic are assigned in turn. In these private lectures each student is made thoroughly familiar with the "technik" of each operation, and, by constant practice upon the maternal cadaver, acquires considerable manual dexterity, before he is allowed to perform any operation upon the living subject. No accuracy of description, no careful delineation of instruments, can take the place of this practical study, to the value of which Schröder bears the most decided testimony.

In the treatment of puerperal eclampsia, the author admits the fact that by free venesection the vascular tension may

be so diminished that the spasms cease; but is led to decide against the use of the lancet, by the consideration that the quantity of blood is the same a short time after as before the venesection, for the vessels everywhere greedily absorb the serum from the surrounding tissues, while the quality has been deteriorated by the bleeding, and hence the two conditions are secondarily produced, to which the eclamptic spasm owes its origin. Schröder, therefore, substitutes for the lancet complete narcotism, effected either by chloroform, or, better still, by morphia, although the tension in the vessels is notably diminished by the use of the first agent, as has been experimentally proved. In reply to this argument, it may be urged that venesection is employed as a vital necessity, in order to avert the pressing danger which each new spasm brings with it, while, by repeated venesections, if necessary, the pressure may be continuously reduced until delivery has been accomplished, and the cerebral congestion attending the violent bearing-down effects no longer exists, or until permanent depletion is brought about by drastic cathartics and diuretics.

An English translation of the book is soon to be published, and it is a significant fact that before its appearance some of our largest universities have already adopted it as the text-book. Its general introduction will be productive of great benefit to the profession, for its influence will be felt, not only in widely disseminating the most recent scientific opinions in this special branch, but also in stimulating and encouraging original thought and investigation.

On Winter Cough, Catarrh, Bronchitis, Emphysema, Asthma: a Course of Lectures delivered at the Royal Hospital for Diseases of the Chest. By Horace Dobell, M.D. New and Enlarged Edition. 8vo. Philadelphia, Lindsay & Blakiston, 1872. Pp. 238.

The handsome new edition of this useful work is a decided improvement on that which preceded it. Delayed in its issue by the inability of its author to isolate himself from the claims of professional practice, it gains for that very reason added importance as embodying the results of a fresher experience. Several new chapters have been added, and the whole work thoroughly revised, with the attractive embellishment of new colored plates, and an index "prepared by the best index-maker in London," which errs, we think, on the side of minuteness, if that be possible. The newer portions of the work treat of Neglected Winter Cough, and the interdependence of this affection with other diseases, while it is evident, even from a hasty glance through the pages of this second edition of Dr. Dobell's treatise, that the additional matter inserted by him under the heads of "Artificial Respiration," "Post-Nasal Catarrh," "Laryngoscopy," "Ear Cough," etc., are of great practical utility, though the amount thus added is not so extensive as the Preface might induce us to expect. The space devoted to Laryngoscopy, for instance, only covers nineteen lines, and is scarcely more than sufficient to tell us that "laryngeal and tracheal catarrh are as easily diagnosed by the stethoscope as by a laryngoscopic examination." The work is written in a pleasant, readable, colloquial style, and this will partly account for its success. Independent, too, of its intrinsic merits, the title is a taking one, much more so, indeed, than if the author had merely, in the caption of his book, announced that he was about to travel the well-beaten high-roads of Emphysema, Bronchitis, etc., in which Winter Cough is, after all, only a conspicuous guide-post.

## BOOKS AND PAMPHLETS RECEIVED.

On Food: its Varieties, Chemical Composition, Nutritive Value, Comparative Digestibility, Physiological Functions and Uses, Preparations, Culinary Treatment, Preservation, Adulteration, etc. Being the substance of four Cantor Lectures delivered before the Society for the Encouragement of Arts, Manufactures, and Commerce, in 1868. By H. Letheby, M.B., M.A., Ph.D., etc., Professor of Chemistry in the College of the London Hospital. Second Edition, Enlarged and Improved. 12mo, pp. xvi., 255. New York, William Wood & Co., 1872.

The Treatment of Venereal Diseases: a Monograph on the Method pursued in the Vienna Hospital, under the Direction of Prof. Von Sigmund, including all the Formulæ. By M. H. Henry, M.D., Surgeon to the New York Dispensary—Department of Venereal and Skin Diseases, Fellow of the New York Academy of Medicine, etc. etc. Adapted and Arranged from the German. 8vo, pp. 49. New York, William Wood & Co., 1872.

The Ten Laws of Health; or How Disease is Produced and How it can be Prevented. By J. R. Black, M.D. Small 8vo, pp. 322. Philadelphia, J. B. Lippincott & Co., 1872.

## GLEANINGS FROM OUR EXCHANGES.

Gun Cotton and its Preparations (Charles H. Mitchell, in an inaugural essay published in the *American Journal of Pharmacy*, June, 1872).—A number of experiments were tried, with a view of ascertaining the relative proportions of cotton and acids, together with the proper time for maceration necessary to produce a cotton which should combine the largest yield with the highest explosive power and solubility. The following formula was at length adopted:

| | |
|---|---|
| Raw Cotton | 2 parts |
| Carbonate of Potassa | 1 " |
| Distilled Water | 100 " |

Boil for several hours, adding water to keep up the measure; then wash until free from any alkali, and dry. Then take of—

| | |
|---|---|
| Purified Cotton | 7 oz. av. |
| Nitrous Acid,* s. g. 1.42 | 4 pts. |
| Sulphuric Acid, s. g. 1.84 | 4 " |

Mix the acids in a stone jar capable of holding two gallons, and when cooled to about 80° Fahr., immerse the cotton in small portions at a time; cover the jar, and allow to stand four days in a moderately cool place (temp. 50° to 70° Fahr.). Then wash the cotton in small portions, in hot water, to remove the principal part of the acid; pack in a conical glass percolator, and pour on distilled water until the washings are not affected by sol. chloride barium; drain and dry. Yield, 11 oz. av.

This cotton is perfectly white, of a harsh, gritty fibre, very explosive, leaving scarcely any ash; soluble in ether, ether fortior, acetic ether, glacial acetic acid, and in a mixture of alcohol and ether varying from one part ether to three parts alcohol to pure ether itself. If a cotton superior to this is desired, it may be obtained by treating this cotton with an additional proportion of the mixed acids, washing, and drying as before. The cotton gains about one per cent. in weight, becomes perfectly soluble, and is so free from any ash as to scarcely scorch a sheet of white paper it may be burnt on. Both this and the previous gun-cotton may be ignited on gunpowder without exploding it. The advantages claimed for this cotton over that of the U.S.P. are that it is perfectly soluble, very explosive, cheap, its manufacture is much more easy, requiring but little time and attention, and turning out a superior product with large yield and less cost.

The subject of collodion next claims our attention, it being the most important pharmaceutical preparation of gun-cotton. The applicability of gun-cotton in ethereal solution to the dressing of wounds, inflamed surfaces, etc., was first made known by Dr. Horace Maynard, of Boston. Its valuable properties soon commanded attention, and at once supplied a want long felt in the medical profession. No better formula for collodion can be found than that of the U.S.P. Using the cotton prepared as before mentioned, it left nothing to be desired.

Collodion can also be made the vehicle for other medicines. Only those remedies which are used externally, of course, can be administered in this manner. Having made a number of experiments on this subject, I present the following formulæ, several of which I think are new:

* Nitric, saturated with nitrous acid.—Ed. *Amer. Jour. Pharm.*

STYPTICS.

*Styptic Collodion.*

℞ Tannin, ℥ij,
Stronger alcohol, f℥iv,
Stronger ether, f℥xij,
Soluble cotton, ℥j ℈ij,
Canada balsam, ℥j.

Introduce the cotton into a suitable bottle, pour on it two fluidounces of alcohol, shake well; then add ten fluidounces of the ether, agitate frequently until dissolved. Dissolve the tannic acid in a mixture of the remainder of the alcohol and ether, mix with the first liquid, add the balsam, allow to stand until clear; then pour off.

*Collodion with Sesquichloride of Iron.*

℞ Sesquichloride of iron, ℥j grs. iv,
Stronger alcohol, f℥iv,
Stronger ether, f℥xij,.
Soluble cotton, ℥j grs. iv.

Into a suitable bottle introduce the cotton, pour on two fluidounces of the alcohol, and shake well; then add the ether, and agitate frequently until dissolved. Dissolve the sesquichloride of iron in the balance of the alcohol; mix with the prepared collodion.

ANODYNES.

*Collodion with Aconite.*

℞ Pulv. aconite root, ℥ij,
Ether, f℥vj,
Soluble cotton, ℥j grs. iv,
Stronger alcohol, q. s.

Mix the ether with two fluidounces of alcohol, moisten the aconite with one fluidounce of this, pack in a percolator and percolate with the balance, pouring on q. s. alcohol to recover eight fluidounces, in which dissolve the cotton.

*Collodion with Belladonna.*

℞ Powdered belladonna root, ℥ij,
Ether, f℥vj,
Alcohol, q. s.,
Gun-cotton, ℥j grs. iv.

Mix the ether with two fluidounces of alcohol, moisten the belladonna with one fluidounce of this, pack in a percolator and percolate with the balance, pouring on q. s. alcohol to recover eight fluidounces, in which dissolve the cotton.

ANTISEPTICS AND DISINFECTANTS.

*Collodion with Carbolic Acid.*

℞ Carbolic acid, ℥j,
Ether, f℥vj,
Stronger alcohol, f℥ij,
Gun-cotton, ℥j grs. iv.

Dissolve the gun-cotton in the ether and alcohol mixed, and then add the carbolic acid.

*Collodion with Sulphocarbolate of Zinc.*

℞ Sulphocarbolate of zinc, ℥j,
Ether, f℥vj,
Stronger alcohol, f℥ij,
Gun-cotton, ℥j grs. iv.

Introduce the cotton into a suitable bottle, add one fluidounce of alcohol, shake well; add the ether, and agitate frequently until dissolved. Dissolve the zinc salt in the balance of the alcohol, and mix with the prepared collodion.

*Collodion with Thymol.*

℞ Thymol, ℥j,
Ether, f℥vj,
Stronger alcohol, f℥ij,
Gun-cotton, ℥j grs. iv.

Dissolve the cotton in a mixture of ether with part of the alcohol, dissolve the thymol in the balance of the alcohol, and mix.

STIMULANTS IN CUTANEOUS DISEASES.

*Collodion with Iodide of Mercury.*

℞ Iodide of mercury, ℥j,
Iodide of potassium, ℥ss,
Alcohol, f℥iv,
Ether, f℥iv,
Gun-cotton, ℥j grs. iv.

Triturate the iodides together in a mortar, add the alcohol boiling, and rub until they are completely dissolved. Then add the gun-cotton, lastly the ether, and agitate frequently until the cotton is all dissolved.

STIMULANTS AND RUBEFACIENTS.

*Collodion with Arnica.*

℞ Pulv. arnica, ℥iv,
Ether, f℥xij,
Stronger alcohol, q. s.,
Gun-cotton, ℥ij grs. viij.

Mix the ether with four fluidounces of alcohol. Moisten the arnica with q. s. of this, pack in a percolator, and pour on the balance, following with alcohol until sixteen fluidounces of tincture have been recovered; to this add the cotton, and agitate frequently until dissolved.

*Collodion with Capsicum.*

℞ Grd. capsicum, ℥iv,
Ether, f℥xij,
Stronger alcohol, q. s.,
Gun-cotton, ℥iss grs. x.

Proceed as in collodion with arnica, recovering sixteen fluidounces of tincture, in which dissolve the gun-cotton.

*Collodion with Mezereon.*

℞ Mezereon, ℥iv,
Ether, f℥xij,
Alcohol, q. s.,
Gun-cotton, ℥ij grs. viij.

Mix the ether with four fluidounces of strong alcohol, and in this allow the mezereon to macerate one week. Drain, pack tightly in a conical percolator, pour on the separated liquid, and follow with enough alcohol to recover sixteen fluidounces of tincture, in which dissolve the cotton.

*Collodion with Savin.*

℞ Powd. savin leaves, ℥iv,
Ether, f℥xij,
Alcohol, q. s.,
Gun-cotton, ℥ij grs. viij.

Proceed in the same manner as collodion with capsicum.

*Collodion with Black Pepper.*

℞ Grd. Blk. Pepper, ℥iv,
Ether, f℥xij,
Alcohol, q. s.,
Gun-cotton, ℥ij grs. viij.

Proceed in the same manner as in collodion with capsicum.

VESICANTS.

*Collodion with Cantharides.*

℞ Powd. cantharides, ℥iv,
Ether, f℥xij,
Stronger alcohol, q. s.,
Gun-cotton, ℥ij ℈j.

Moisten the cantharides with a small portion of the ether, and pack in a conical percolator. Then pour on the balance of the ether, mixed with four fluidounces of alcohol, and follow with enough alcohol to recover sixteen fluidounces, in which dissolve the gun-cotton.

These collodions can be used as substitutes for many of the officinal plasters, having the advantage of occupying a small bulk, ready adaptability to any surface, and powerful therapeutic action.

I have endeavored, as far as possible, to give some practical information on a branch of pharmacy of which comparatively little is known. The subject is, I think, an important one, since gun-cotton and collodion occupy a high position in both medicine and the useful arts, and to its elaboration and useful application too much study cannot be devoted.

THE ACTION OF HOT BATHS IN DROPSY (*Jahrb. für Kinderh.*, N. F. iv. 317: by Steffen).—Hot baths are adaptable to all ages, even the tenderest (that is, baths of 28° R. heated to 33°–34° while the patient is immersed, with subsequent sweating of two to three hours). In weakly individuals, however, the repetition of the baths must not be at too short intervals, because after the last bath the decrease of the amount of fluid from the weight of the body often lasts of itself one or more days. Indications for these baths are found in diffuse transudations into the cellular tissue, free extravasations into the abdominal cavity, in the pleura and pericardium;

in the latter case, where the serous collection has not reached too high a grade. If the transudations are the result of a depressed vital condition, or of persistent intestinal catarrh, they will disappear with appropriate treatment without hot baths; but in a high grade of fluid collection the baths expedite the cure. Pilz has spoken (*C.-Bl. Med. Wiss.*, 1870, 491) of their good effects in the dropsy of scarlatina. The collections of fluid are more difficult of dispersion when dependent on pathological changes in certain organs. A permanent disappearance can then be expected only when at the same time the fundamental organic disease is relieved. Still, even here the hot baths are of marked benefit, not only because they give the patient temporary relief, but also by hindering, as much as possible, an excessive accumulation of fluid, and thereby avoiding or postponing a fatal termination. Among the pathological processes which lead to effusions, and against which, with more or less effect, Dr. S. has employed hot baths, we may specify, besides the dropsy of scarlet fever, simple nephritis with marked albuminuria and voiding of fibrous cylinders in the urine, chronic affections of the liver and spleen, and chronic diseases of the heart. As decided contra-indications to be observed are: the presence of fever, and therefore the majority of diseases in their acute form, affections of the brain and its membranes, inflammatory exudations and transudations in the pericardium, marked depression of the vital strength, and, finally, the commencement of œdema of the lungs.

CHOLERA.—According to the *Wiener Med. Presse*, the schools and gymnasia in Kamenez-Podolski and Kiev were closed in June on account of apprehensions of this disease. A general panic prevailed among the people. Advices from Odessa reported numerous cases of cholerine (hitherto so called), now regarded as true cholera, and terminating fatally; and the cholera has broken out in the Chersonese. In Malta, a ten days' quarantine is ordered for all persons coming from Constantinople. In Kiev, the chief city of the Ukraine, the epidemic was daily increasing in extent and severity. On the 12th and 13th of June, there sickened 404 persons with it, of whom 189 died. From the breaking out of the disorder to the 14th of June, there had been 1317 cases and 532 deaths. Among the pilgrims going to the Orthodox Convent in Kiev, who during the summer swarm from every part of Russia, the epidemic was most violent.

ON THE CHEYNE-STOKES RESPIRATORY PHENOMENON (Merkel; from *Deutsch. Arch. f. klin. Med.*, viii. pt. 47).—The phenomenon occurred after an apoplectic attack with paralysis of the left side, in December, 1869, in a man forty-seven years old, emphysematic, anæmic (with hemorrhoids), and with rigid radial and temporal arteries. "The breathing was at first somewhat superficial, then increased in depth without increasing in frequency up to the greatest dyspnœa, in which all the auxiliary muscles of the neck and face were fixed. After this had lasted from thirty to forty-five seconds, a complete pause in the breathing occurred of about twenty to thirty seconds, during which the pupils were contracted and immovable. Then the surface-breathing again appeared, and the play began anew." The hemiplegia improved, the peculiar respiratory phenomenon had decreased after a few days, with the exception of slight indications, but these persisted.

Towards November, 1870, after several months of feeling ill, the phenomenon again arose, and gradually increased to a terrible persistency. In the first weeks of December there were here and there pauses of as long as a quarter of an hour, when the patient was able to eat, but towards Christmas these also disappeared, and there was literally not fifteen minutes' rest by day or night. The consciousness was retained during the dyspnœa, the patient answered with effort to questions, but during the apnœa he became completely stiff, and stared with contracted pupils, although the eyes remained quiet. With the beginning of the respiratory act, the pupils enlarged and then reacted. Spasms of the facial muscles occurred during the final twenty-four hours. Death occurred with tracheal râles on the 29th of December. Injections of morphine increased the disturbance. Chloral hydrate, which gave several hours of rest, was soon rejected.

Post-mortem after twenty-four hours: skin strikingly pale, moderate emaciation, marked cadaveric rigidity, scalp very compact. Sinuses of the dura mater empty; the arteries of the base excessively rigid, their inner coat much corrugated; in the coats were hard and partly calcareous deposits up to one mm. in thickness and two mm. in length, which contracted the calibre to a minimum. The soft coverings of the brain were very delicate; their arteries also quite rigid and tortuous. The brain was strikingly empty of blood; the medulla pure, white, and hardened. In the lateral ventricles only a few drops of serum. At the edges of the optic thalami and corpora striata was a serous cyst of the size of a lentil with rusty red flattened walls. In the middle of the pons three similar cysts of the size of a hemp-seed with unsoftened surroundings. Cerebellum and medulla oblongata normal. The lungs largely emphysematous, and almost entirely covering the heart. Much œdema of the lungs. Moderate bronchial catarrh. Very slight fatty degeneration of the hypertrophied and dilated heart. General and knobby thickening of the inner coat of the aorta; no calcareous deposits. Rigidity of all the medium-sized arteries, with but slight calcareous deposit. Granular atrophy of the kidneys.

## MISCELLANY.

THE LATE DR. A. H. FISH.—At a special meeting of the Medical Board of Charity Hospital, held August 6, 1872, the following resolutions were adopted as expressive of the feelings of the Board in regard to the death of one of their members, Dr. A. H. Fish:

"*Whereas*, It has pleased an All-wise Providence to remove from our midst by death our friend and colleague, Dr. A. H. Fish, be it therefore

"*Resolved*, That we, the Medical Board of Charity Hospital, express our heartfelt sorrow at his death, earnestly believing that our loss is his gain.

"*Resolved*, That the Secretary be instructed to express our warmest sympathy with the family of the deceased in their affliction, and that a copy of these resolutions be forwarded to them, and be published in the medical journals."

DISCOVERY OF ANÆSTHETICS.—According to the *Journal of Applied Chemistry*, chloroform was first made by Mr. Guthrie, a druggist, of Sackett's Harbor, N. Y., in 1831. He called it chloric ether. Liebig in Germany, and Soubeiran in France, subsequently discovered it, and a claim for priority has been set up for each of them.

Dr. R. H. Collyer, of London, states, in the *Medical Times and Gazette*, that he published in 1843 accounts of operations done by him on patients rendered insensible by the "inhalation of narcotic and stimulating vapors;" and therefore that he can justly claim to have anticipated Wells, whose "first essay with nitrous oxide only dates from December, 1844."

WE regret to see a statement in the *Medical Record* that the Strangers' Hospital in New York has been closed for want of funds. The Commissioners of Charities and Correction contemplate purchasing it for an accident hospital.

DONATIONS AND BEQUESTS TO MEDICAL INSTITUTIONS.—The Middlesex Hospital in London received in February last £20,000, the proceeds of the sale of paintings and works of art which had belonged to the late Mr. Broderip, who had expressed a wish that they should be so disposed of. He had, during his lifetime, made a donation of similar amount to the institution.

The *Lancet* says, "It is announced that a gentleman has offered to give £10,000 towards the establishment of a convalescent institution at Morecombe, near Bradford."

LETTERS received from Professor Gross mention that he intends leaving Liverpool for home on the 24th of September. Professors Da Costa and Agnew will, we believe, return somewhat sooner.

DEATH OF DR. BELL.—Dr. John Bell, one of the oldest physicians in this city, died at his residence in South Broad Street on the 19th of August, after a very long and tedious period of failing health.

AMERICAN OPHTHALMOLOGICAL SOCIETY.—In order to enable the members of this society to attend the International Congress in London, its meeting, which was to have been held at Newport, R.I., early in August, was postponed until the third Thursday in July, 1873.

HABITUAL DRUNKARDS.—REPORT OF PARLIAMENTARY COMMITTEE.—The "select committee appointed to inquire into the best plan for the control and management of habitual drunkards" have made a report, from which we gather that they have examined constables, magistrates, coroners, inspectors of insane asylums, managers of reformatories, physicians and surgeons from different sections of Great Britain, and Dr. Parrish of this city, with his colleague, Dr. Dodge of Binghamton, N.Y., and have presented to the House of Commons the result of their careful and deliberate inquiry.

A few points of their report will be noticed as follows:

"An entire concurrence of all the witnesses in the absolute inadequacy of existing laws to check drunkenness.

"That small fines and short imprisonments are useless.

"That occasional drunkenness frequently passes into the condition of a disease uncontrollable by the individual.

"That self-control is suspended, or annihilated.

"That this is confined to no class, condition, nor sex, and hardly to any age.

"That the moderate use of alcoholic liquors is unattended by any bad effects, while there is much to prove that excess in ardent spirits is far more deleterious than similar excess in wine or beer.

"That it is in evidence that there is a very large amount of drunkenness among all classes and both sexes, which never becomes public, nor is dealt with by the authorities, but which is probably even a more fertile source of misery, poverty, and degradation than that which comes before the police courts.

"That there is a difference between the paroxysm of intoxication and insanity proper, so distinct as to forbid the plea in bar of punishment that an offence was committed while drunk; still, placing inebriates in lunatic-asylums is improper and should not be allowed.

"That when acts of violence or other offences are superadded to the drunkenness, the ordinary punishment awarded by law to those offences should be carried out, and committal to a reformatory may form part of a sentence, or it may be left to the discretion of the magistrate to send him at once to an inebriate reformatory.

"That sanitaria or inebriate reformatories are producing considerable good in effecting amendment and cures in those who have been treated in them."

The committee recommend that sanitaria or reformatories for those who, notwithstanding the plainest conditions of health, interest, and duty, are given over to habits of intemperance so as to render them unable to control themselves and incapable of managing their own affairs, or such as to render them in any way dangerous to themselves or others, should be provided: that these should be divided into two classes,—private for those who can pay their own way, and public for those who cannot.

Various collateral recommendations are embodied in the report, and an appendix accompanies it, containing a correct report of all the evidence.

The following gentlemen constitute the committee: Mr. Donald Dalrymple (chairman), Sir Harcourt Johnstone, Mr. Birley, Mr. Henry Samuelson, Mr. Wharton, Dr. Lyon Playfair, Mr. Akroyd, Mr. Mitchell Henry, Lord Claud John Hamilton, Mr. Miller, Mr. Downing, Major Walker, Mr. William Henry Gladstone, Mr. Clone Read, Colonel Brise.

PROF. ESMARCH, of Kiel, whose first wife was a daughter of Stromeyer, has recently married the Princess Henrietta of Schleswig-Holstein.

PROF. TRAUBE, says the *Lancet*, has finally been assigned to a chair in the University of Berlin, having been only "extraordinary professor," teaching without a regular appointment. The reason given for his being kept out of such a position is that the late Minister (of Public Instruction?) Von Mühler would not overlook the fact of Traube being a Jew.

HYDROPHOBIA FROM SKUNK-BITES.—The daily papers have recently contained reports of two cases of this kind. One is said to have occurred in the West, about six weeks ago, and the other at Newburg, N.Y., in the latter part of July.

EPIDEMICS.—Telegraphic advices state that an epidemic disease, having some features in common with yellow fever, is raging at Carthagena, five thousand persons having been attacked, with, however, only 200 deaths, or 4 per cent. of the cases.

Both in Peru and Chili smallpox is said to be prevailing. More than one-half of 1500 deaths which occurred in Valparaiso during the month of June were from this disease.

Much excitement has recently prevailed among the people of Staten Island, on account of the anchoring in their neighborhood of the Spanish iron-clad Numancia, having three cases of yellow fever on board. She was finally removed, and anchored off the S.W. Spit. We have heard of no spread of the disease on shore.

Two other vessels arrived in New York on the 14th of August, having yellow fever on board. They were both quarantined in the lower bay.

METEOROLOGICAL.—According to the records kept at the Pennsylvania Hospital, the mean temperature of the month of July of this year was 82.30°; the mercury having reached the highest point, 98°, on the 1st, 2d, and 3d days of the month, and the lowest, 69°, on the 20th. The rain-fall was 11.215 inches; a somewhat unusual amount.

DR. MIFFLIN WISTAR, a son of Dr. Caspar Wistar the elder, the second Professor of Anatomy in the University of Pennsylvania, and brother of the late Dr. Caspar Wistar, died in this city on the 19th ult., in the 63d year of his age. He had long since retired from active life.

DR. WHATELY'S AND SYDNEY SMITH'S REMEDIES.—After ages of experiment and experience, the art of curing is still such an uncertain art that thousands might say, as the poor invalid said, "I never took a remedy, but I've had lots of physic." Dr. Whately could have said just the contrary. He did not take lots of physic, but had a remedy, nevertheless, that stood him in good stead at all times and seasons. A gentleman making an evening call at Redesdale, when the snow lay two feet thick upon the ground, was much scandal-

ized at beholding an old man in shirt-sleeves hard at work felling a tree, while the sleet drifted pitilessly in his wrinkled face. Upon expressing his surprise that the archbishop should let an old laborer work in such fashion, he was astonished to learn that the poor fellow exciting his wrathful pity was the archbishop himself, getting rid of a headache in his usual way, which was to throw off his coat, lay hold of an axe, and rush out-of-doors and belabor some stout old trunk till he found himself perspiring freely; when down went the axe, and off went Dr. Whately as hard as he could tear to his bedroom, to wrap himself up in his newest blankets, go to sleep, and arise by-and-by "as fresh as a four-year-old." Sydney Smith prepared for all eventualities by devoting one side of a room to a collection of medicines, on the efficacy of which he plumed himself not a little. "There's the Gentle-joy, a pleasure to take it; the Bull-dog, for more serious cases; Peter's Puke and Heart's Delight,—the comfort of all the old women in the village; Rub-a-dub, a capital embrocation; Dead-stop settles the matter at once; and Up-with-it-then needs no explanation. This is the house to be ill in; everybody who comes here is expected to take a little of something. I consider it a delicate compliment when my guests have a slight illness. We have contrivances for everything. If you have a stiff neck or a swelled face, here is this sweet case of tin, filled with hot water, and covered with flannel, to put round your neck, and you are well directly. Likewise, a patent tin shoulder in case of rheumatism. There you see a stomach-tin, the greatest comfort in life; and, lastly, here is a tin slipper, to be filled with hot water, which you can sit with in the drawing-room should you come in chilled, without wetting your feet." Sydney Smith had almost as much faith in hot water as Burke, only he was for its external use; some of his contrivances might certainly be generally adopted with advantage. Scott's Ashestiel blacksmith, who, upon the strength of a little veterinary skill, set up for a doctor of human kind in a small English town, was a man of few remedies. As he told Sir Walter, his practice was very sure, and perfectly orthodox, for he depended entirely on "twa simples." "And what may they be?" asked Scott, with some curiosity. "I'll tell your honor," said Lundie; "my twa simples are just laudamy and calamy!" "Simples with a vengeance!" exclaimed the poet. "But do you never happen to kill some of your patients, John?" "Kill? Ou, ay, maybe sae! Whiles they die, and whiles no; but it's the will o' Providence. Onyhow, your honor, it wad be lang before it makes up for Flodden?" That last touch went straight to Scott's heart, we may be sure. Johnnie Lundie was not quite so frank with the unlucky victims of his orthodox practice; frankness with them would have been unprofessional. It would, perhaps, be a change for the better if European doctors could imitate the plain-speaking Chinaman, Li Po Sai, who, when called in by a Californian gentleman, after the usual examination, said, "I think you too much dance, too much eat, too much goot round. If you dance, you no get better; too much eating no good; too much gooting round no good. Good-by!" Dared our medical advisers be as honest as our Chinese brother, drugs would be at a discount indeed; but then it is just possible the registrar-general might be able to show a cleaner bill of health.

PHYSICIANS IN PENNSYLVANIA.—According to the revised Census returns, the number of physicians and surgeons in this State is 4843. The other learned professions are less numerously followed,—there being only 3841 clergymen, and 3253 lawyers.

THE UNIVERSITY HOSPITAL.—Work has been commenced in levelling and grading the lot in West Philadelphia, bounded by Thirty-fourth and Thirty-sixth and Spruce and Pine Streets, on which the new University Hospital is to be erected. $200,000 has been subscribed for the hospital, besides a grant of $100,000, which was obtained from the State Legislature. The building will be complete in all the details necessary for a first-class hospital. The new University is nearly complete, and the fall term of studies will be commenced in the new building.

JEEFERSON MEDICAL COLLEGE.—We are informed that the project of a hospital in connection with this school is being fostered with much energy. No one as yet knows, we believe, whether the trustees will buy up properties adjacent to the present college building, and erect the hospital there, or whether they will transfer the school to some other point. Both plans are spoken of, and each seems to us to have certain advantages.

MORTALITY OF PHILADELPHIA.—The following reports are condensed from the records at the Health Office:

| | For the week ending | | |
|---|---|---|---|
| | Aug. 10. | Aug. 17. | Aug. 24. |
| Consumption | 31 | 42 | 60 |
| Other Diseases of Respiratory Organs | 16 | 20 | 14 |
| Diseases of Organs of Circulation | 11 | 19 | 13 |
| Diseases of Brain and Nervous System | 44 | 69 | 74 |
| Diseases of the Digestive Organs | 45 | 53 | 32 |
| Diseases of the Genito-Urinary Organs | 6 | 8 | 4 |
| Zymotic Diseases | 28 | 41 | 31 |
| Cholera Infantum | 101 | 104 | 69 |
| Cancer | 5 | 3 | 7 |
| Casualties | 13 | 17 | 16 |
| Intemperance | 3 | 7 | 0 |
| Sunstroke | 1 | 8 | 13 |
| Old Age | 12 | 15 | 14 |
| Syphilis | 0 | 1 | 2 |
| Stillborn | 13 | 11 | 21 |
| Suicide | 2 | 1 | 0 |
| Marasmus | 46 | 36 | 30 |
| Unclassifiable | 45 | 39 | 25 |
| Unknown | 0 | 1 | 1 |
| Totals | 422 | 495 | 426 |
| Adults | 142 | 203 | 201 |
| Minors | 280 | 292 | 225 |

## OFFICIAL LIST

*OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM AUGUST 5 TO AUGUST 19, 1872, INCLUSIVE.*

EDWARDS, L. A., SURGEON.—By S. O. 187, War Department, A. G. O., August 13, 1872, leave of absence further extended thirty (30) days.

BROOKE, JOHN, ASSISTANT-SURGEON.—By S. O. 84, Department of the Columbia, July 24, 1872, relieved from duty at Camp San Juan Island, and ordered to Sitka, Alaska, for duty as Post Surgeon.

PHILLIPS, H. J., ASSISTANT-SURGEON.—By S. O. 84, Department of the Columbia, July 24, 1872, relieved from duty at Sitka, Alaska, and ordered to report in person to the Medical Director of the Department.

O'REILLY, R. M., ASSISTANT-SURGEON.—By S. O. 71, Military Division of the Missouri, August 3, 1872, leave of absence extended thirty (30) days.

CARVALLO, CARLOS, ASSISTANT-SURGEON.—By S. O. 184, A. G. O., August 9, 1872, leave of absence extended fifteen (15) days.

GIRARD, A. C., ASSISTANT-SURGEON.—By S. O. 140, Headquarters Department of Texas, August 10, 1872, granted leave of absence for thirty (30) days on surgeon's certificate of disability.

WILSON, A. D., ASSISTANT-SURGEON.—By S. O. 151, Department of the East, August 12, 1872, to report to the Commanding Officer, Fort Warren, Mass., for temporary duty.